

Henshaw, H. W. Ornithology of portions of California.

(1876)

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APPENDIX H8.

REPORT ON THE ORNITHOLOGY OF THE PORTIONS OF CALIFORNIA VISITED DURING
THE FIELD-SEASON OF 1875 BY H. W. HENSHAW.

UNITED STATES ENGINEER OFFICE,
GEOGRAPHICAL SURVEYS WEST OF THE 100TH MERIDIAN,
Washington, June 10, 1876.

SIR: I have the honor to transmit the following report upon the ornithology of the portions of California visited by me during the field-season of 1875.

As a field for ornithological research, the region as a whole was by no means a new one, parts of California having been traversed by several governmental parties, and more or less extensive collections of birds made by the naturalists of the several surveys. The more southern portions of the State, however, those visited by us, were believed to be possessed of much interest, special importance attaching to the region lying about Mount Whitney as being less known, and hence likely to present features of value when studied with a view to its avian fauna.

While these expectations were not wholly borne out, the results obtained are believed to be possessed of considerable value in their bearing on the distribution of the many species that came under observation. Quite a number of birds were found at points considerably farther south than had previously been chronicled, and the range of others extended westward. Such instances are mentioned in detail under the re-

* A specimen of this singular Cactus, nestling amid the barren rocks, with but very little soil accumulated between them, is shown in the accompanying figure.

ERRATA. (Appendix H 8.)

Page 225, thirty-third line from top, for "Vuepes" read "Vulpes."
Page 227, first line from top, for "itt" read "Nutt."
Page 228, seventh line from bottom, for "Chamæodae" read "Chamæidae."
Page 228, sixth line from bottom, for "Chamoea" read "Chamæa."
Page 232, tenth line from top, for "cucogaster" read "leucogaster."
Page 235, fifth line from top, for "lunifrous" read "lunifrons."
Page 237, eighth line from top, for "Miadestes" read "Myiadestes."
Page 237, twenty-fifth line from top, for "Swains" read "Swainsons."
Page 240, twenty-fifth line from top, for "P. savannas" read "P. savanna."
Page 241, seventeenth line from top, for "alandinus" read "alaudinus."
Page 243, thirteenth line from bottom, for "navadensis" read "nevadensis."
Page 245, twenty-fifth line from top, for "Peucœa" read "Peucaea."
Page 247, fifteenth line from bottom, for "mesolencus" read "mesoleucus."
Page 248, fifth line from top, for "Zorotrichias" read "Zonotrichias."
Page 251, eleventh line from top, for "Baxtr" read "Bartr."
Page 254, eleventh line from bottom, for "Contopis" read "Contopus."
Page 254, seventeenth line from bottom, for "Cantopus" read "Contopus."
Page 255, fifteenth line from top, for "flaviventri" read "flaviventris."
Page 257, fifteenth line from top, for "costoe" read "costæ."
Page 258, ninth, seventeenth, twenty-third, and twenty-sixth lines from bottom, for
"scolaris" read "scalaris."
Page 262, twenty-third line from top, for "cuniculari" read "cunicularia."
Page 263, fourth line from bottom, for "hawesii" read "beecheyi."
Page 264, eleventh line from bottom, for "Cucurus" read "leucurus."
Page 265, tenth line from top, for "Cathardidæ" read "Cathartidæ."
Page 266, twenty-fourth line from bottom, for "Laphortyx" read "Lophortyx."
Page 270, seventeenth line from top, for "piso" read "precisely."
Page 270, ninth line from bottom, for "melanacephalus" read "melanocephalus."
Page 271, fifteenth line from top, for "Phalarophidæ" read "Phalaropodidæ."
Page 272, eighteenth line from top, for "Heteoscelus" read "Heteroscelus."
Page 276, seventh line from top, for "violacens" read "violaceus."
Page 278, twelfth line from top, for "columbia" read "columba."

[This appendix passed through the press during the absence in the field of Mr. Hen -
shaw.]

specie species. Not a small portion of the country traversed by the Survey was found to be remarkably destitute of birds, not only as regards the number of species, but also the number of individuals seen was small. In some sections, as on the dry and arid plains, the nature of the country itself furnishes the cause of this; but elsewhere, I am inclined to attribute much of this paucity of bird life to the presence of sheep and to the effect they have had on the vegetation, for over a very large region in Southern California these animals exist in such numbers as to fairly render their pasture-grounds little else save howling deserts, attractive neither to themselves nor to any other living creature. Not only is this true of the lower, more accessible, portions, but it was found to be the case in the lofty mountains of the Sierra, where thousands of sheep are driven in summer, their combined numbers resulting almost in the obliteration of every green thing within their reach. Not only are destroyed the plants and flowers upon which depend the presence of insects, which furnish to many birds a large proportion of their food; but this is accompanied by the destruction of much of the under-growth, so essential to the mode of life of many of the smaller species. In no other way could I account for the fewness of birds in districts that seemed possessed of all the natural requisites to attract them in great numbers, but where the painful desolation brought about from this cause was accompanied by a marked scarcity of feathered life.

The field-work began June 1, at which time Doctors Rothrock, Loew, and myself visited the island of Santa Cruz, the most inland of the group of islands lying in the Santa Barbara Channel. The two weeks spent on the island were mostly occupied in making general collections in natural history. The surface of the island is extremely rough, and broken up in every direction by rocky ridges, which render all travel exceedingly difficult; and in the little time that was spent in collecting the land-birds it is not probable that by any means all of the species were found. All that came under notice occur on the mainland, and differ in no respect. Many species of sea-birds resort to these islands for the purpose of reproduction; fewer, however, to Santa Cruz than to the others.

Two species, *Uria columbe* and *Fratercula cirrhata*, were found to breed here; this fact being of interest as indicating a range at this season much farther south than suspected before. Among other objects of value obtained here was a series of specimens of the little "Island Fox," (*Vulpes littoralis*), an animal but little known to naturalists, and of great rarity in collections. They inhabit the islands in very great numbers, and are found, as far as known, nowhere else. A quite extensive collection of fish and mollusks was also made.

In connection with our work on the island, it is a pleasant duty to mention the courtesy and many favors our party received from the officers of the Hassler, who one and all interested themselves in the object of our visit, and contributed much to its success. Indeed, it was through the kindness of Capt. H. C. Taylor that we were enabled to visit Santa Cruz, which otherwise would have been most difficult.

Upon joining the main party at Los Angeles, June 15, the original plan for the season's work was changed so as to admit a small natural-history party in charge of Dr. Rothrock to return to Santa Barbara, and there meeting Dr. Yarrow to prosecute our work in connection with archaeological researches in this neighborhood. The locality was found to be extremely rich in Indian mounds used as burial-places, and, as a result of labors here, a large collection of Indian remains and implements was examined.

The collections in zoology made here were also quite large, including not only a large number of birds, but also many insects, fish, reptiles, &c., for many of which we are indebted to the zeal and interest displayed by Mr. C. J. Shremaker.

Leaving Santa Barbara July 13, we proceeded to old Fort Tejon, there joining the main party. About this point rather more than a month was occupied, two short trips being made to the neighboring mountains, where several rare and interesting birds were found.

September 4 the party set out for the Mount Whitney country, where the time up to the middle of October was taken up. The mountains of this region are, many of them, well wooded, mostly with pine and tamarack, while the streams, as usual in these high altitudes, were more or less densely fringed with deciduous vegetation. The avian fauna was found at this time to be quite limited in the aggregate of species, and, as a rule, not numerously represented in individuals. The absence of the Warbler tribe (*Sylvicolidae*) was especially noticeable. The only ones of this family seen here were the *Helminthophaga celata*, *Dendroica audubonii*, *D. occidentalis*, and *Myioictes pusillus*, all of them being comparatively rare.

Returning from Mount Whitney, the remaining interval up to October 15 was spent near Kernville and at Walker's Basin, when the field-work ended.

The season's collection of birds amounted to 700 specimens, representing 127 species. In addition, a considerable number were observed in greater or less numbers, and find mention in the report. A list of the specimens, with the localities where collected, follow each species; and, in the case of those less known, careful measurements are given.

A synonymieal list follows such of the species as were not thus treated in our previous report.

In most instances, the classification followed is that given by Baird, Brewer, and Ridgway in their recent work on North Ameriean Birds. In the Waders and Waterbirds, that adopted by Dr. Cones is taken.

TURDIDÆ.—THRUSHES.

1. *Turdus migratorius*, L.—Robin.

Nowhere in the region south of San Franeiseo does the Robin appear to be a common bird, and, indeed, it was rarely seen by us till after September, when they were found here and there in the mountain-valleys, not in large flocks but leading rather a hermit life, and subsisting much upon berries.

2. *Turdus naevius*, Gm.—Varied Thrush; Oregon Robin.

Turdus naevius, Newb., P. R. Rep., vi, 1857, 81.—Bd., B. N. A., 1858, 219.—Heerm., P. R. R. Rep., x, 1859, pt. vi, 45.—Bd., Zool. Ives's Exped., 1860, 5 (Colorado Valley).—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 190 (Ft. Tejon, Cal.)—Coop. & Suckl., P. R. R. Rep., vol. xii, pt. ii, 1860, 172.—Coues, Proc. Phila. Acad. Nat. Sci., 1866, 88 (Colorado Valley).—Coop., Am. Nat., iii, 1869, 31 (Montana).—Coop., B. Col., 1, 1870, 10.—Coues, Key N. A. B., 1872, 72.—B., B., & R., N. A. B., i, 1874, 29.

In California, this Thrush is found only in the character of a fall and winter visitor, returning with the spring to congenial haunts in the far north, there to pass the season of reproduction. It is usually common about San Francisco in winter, and not a few suffer at the hands of the gunners, and are brought into the markets and sold for the table. Though finding its way to the south of this point, it is in diminishing numbers, and in the foot-hills and low mountains near Caliente it was far from numerous during the last of October and November. They kept in small flocks, and were exceedingly shy and suspicious. In habits, they seem to correspond pretty closely to the Robin, as does their food, which, as with that species, consists largely, in the fall, of berries of various roots.

No.	Sex.	Locality.	Date.	Collector.
642	♂ ad.	Walker's Basin, California.....	Nov. 5	H. W. Henshaw.
643	♀ ad.	.....do.....	Nov. 5	H. W. Henshaw.

3. *Turdus pallasi*, Cab., var. *nanus*, Aud.—Dwarf Thrush Hermit.

Of this little Thrush none were seen previous to the very last of September. After this time, every little willow-thicket along the mountain-streams contained one or more, the migration being at its height from about the 5th to the 15th of this month. I cannot but think that both Drs. Heermann and Cooper had in mind some other species, probably *ustulatus*, when they spoke of the *Turdus nanus* as breeding about and to the south of San Franeiseo. In his description of the spotted eggs of this species, Dr. Cooper unquestionably had in mind those of the *T. ustulatus*, the eggs of the *T. nanus* being perfectly plain, and it seems most likely that this error of identification was carried still further, and all of his statements as to breeding habits and summer habitat be referable to the *T. ustulatus*. In the interior, in the same latitude, the Dwarf Thrush occurs only as a migrant. I am inclined to believe that the breeding of this bird so far south as California, even in exceptional instances, has yet to be substantiated. It certainly does not as a rule occur by any means so far south in summer.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
509	♂	Near Mount Whitney, Cal....	Sept. 29	H. W. Henshaw...	3.58	2.72	0.47	1.15
514	♂	.....do.....	Oct. 3	.....do.....	3.67	3.15	0.54	1.10
515	♀	.....do.....	Oct. 3	.....do.....	3.53	2.87	0.48	1.10
516	♀	.....do.....	Oct. 3	.....do.....	3.32	2.65	0.48	1.12
517	♂	.....do.....	Oct. 3	.....do.....	3.33	2.80	0.51	1.06
535	♂	.....do.....	Oct. 9	.....do.....	3.31	2.85	0.50	1.12
536	♂	.....do.....	Oct. 9	.....do.....	3.52	2.57	0.48	1.12
542	♂	.....do.....	Oct. 10	.....do.....	3.42	2.65	0.54	1.06
543	♂	.....do.....	Oct. 10	.....do.....	3.50	2.81	0.53	1.14
559	♂	.....do.....	Oct. 10	.....do.....	3.47	2.92	0.52	1.16

4. *Turdus swainsoni*, Cab., var. *ustulatus*, itt.—Oregon Thrush.

Turdus ustulatus, Bd., B. N. A., 1858, 215.—Coop. & Suckl., P. R. R. Rep., vol. xii, pt. ii, 1860, 171.—Coop., B. Cal., i, 1870, 5.—Lawr., Proc. Bost. Soc. Nat. Hist., June, 1871 (Tres Marias).
Turdus swainsoni var. *ustulatus*, Coues, Key N. A. B., 1872, 73.—B., B., & R., N. A. B., 1874, 16.—Nelson, Proc. Bost. Soc. Nat. Hist., vol. xvii, 1875, 355 (California).

This race of the more eastern and northern Swainsoni Thrush is found in summer throughout California, where it breeds, resorting to the valleys and lowlands generally, rather than to the mountainous districts. It was in full song about San Francisco the last of May, and the species was probably at this time nesting. Its habits and very nature appear to be different from its nearest ally, the Swainsoni Thrush. Unlike that bird, instead of finding a congenial home only in the solitude of the remote northern wilds, it is perfectly content to live a near neighbor to, and a companion of, man, and dwells as contentedly as the Robin in the gardens and orchards on the outskirts of the towns. Its song I frequently heard coming from the midst of the shrubbery that environs the houses. It is exceedingly like the well-known strains of the Wilson's Thrush, though seeming to lack something of the depth of tone and wildness which gives that song its chief charm. It is, too, rather shorter. At Santa Barbara, I found the young fully fledged by the last of June.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
66	♂ ad.	Santa Barbara, Cal.....	June 25, 1875	H. W. Henshaw.....	3.87	3.30	0.57	1.21
70	♀ ad.	.....do.....	June 26, 1875	....do.....	3.73	3.17	0.57	1.17
71	♂ jun.	.....do.....	June 26, 1875	....do.....	.....	.....	.....	.....
147	♂ ad.	.....do.....	June 29, 1875	....do.....	3.73	3.05	0.52	1.14
148	♀ ad.	.....do.....	June 30, 1875	....do.....	3.72	3.05	0.57	1.12

5. *Mimus polyglottus*, L.—Mocking-bird.

According to Dr. Cooper, the Mocking-bird is said to occur in California as far north as Monterey. Along our route from Los Angeles to Santa Barbara, it was seen on a few occasions only, chiefly on the dry plains, where the prickly pears and other cacti grew in abundance. The Sage-thrasher, (*Oreoscoptes montanus*,) according to Dr. Heermann, is not rare about San Diego. It probably intrudes only into the extreme southern portion of the State.

6. *Harporynchus redivivus*, Cabanis.—California Sickle-bill Thrush.

Harporynchus redivivus, Bd., B. N. A., 1858, 349.—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 191.—Coop., B. Cal. i, 1870, 15.—Coues, Key N. A. B., 1872, 75.—B., B., & R., N. A. B., i, 1874, 45.

This Thrush was found in various localities throughout Southern California, where it is a constant resident. Though preferring the lowlands, we occasionally saw these birds in the dense chaparral that clothes the bases of many of the low mountains. Like the others of this singular genus, it is eminently terrestrial in its habits, its stout, strong claws, aided by its heavy bill, being well adapted for scratching among the leaves and débris for all sorts of insect life. It is shy and timid, and covets the seclusion of the hedges and thickets at all times. When alarmed, its wings serve to carry it for a short distance, till it has gained some covert, when its active feet enable it to keep out of sight by dodging here and there till its safety is assured.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
45	Ad.	Santa Barbara, Cal.....	June 25	H. W. Henshaw.....	3.65	5.62	1.47	1.52
46	Ad.	.....do.....	June 25	....do.....	3.95	5.45	1.39	1.57
95	Jun.	.....do.....	June 27	....do.....	.....	.....	.....	.....
203	♂ jun.	.....do.....	July 6	....do.....	.....	.....	.....	.....
241	♀ jun.	.....do.....	July 10	....do.....	.....	.....	.....	.....
663	♀	.....do.....	Nov. 9	....do.....	4.12	5.65	1.63	1.53
741	♂ ad.	.....do.....	June 14	....do.....	4.00	5.58	1.55	1.48

CINCLIDÆ.—WATER-OUZELS.

7. *Cinclus mexicanus*, Sw.—Water-ouzel.

Throughout the mountains of the West, it needs only the presence of a stream of water, whirling and foaming over its rocky bed through cañon and pass, to surely attract this

little nondescript to take up its abode on its banks. It occurs on many of the streams of the Sierras, numbers occupying the same reach of stream when food is abundant.

No.	Sex.	Locality.	Date.	Collector.
474	♂	Near Mount Whitney, Cal	Sept. 15	H. W. Henshaw.
475	♂	.....do	Sept. 15	Do.

SAXICOLIDÆ.—STONE-CHATS.

8. *Sialia mexicana*, Sw.—Western Bluebird.

This species replaces in California the common Red-breasted Bluebird of the East, and is very common.

No.	Sex.	Locality.	Date.	Collector.
266	♀ jun.	Tejon Mountains, Cal	Aug. 2	H. W. Henshaw.
273	♂ jun.	.....do	Aug. 2	Do.
303	♂ ad.	Fort Tejon, Cal	Aug. 7	Do.
304	♀ jun.	.....do	Aug. 7	Do.
308	♂ jun.	.....do	Aug. 7	Do.
553	♂ ad.	Near Mount Whitney, Cal	Oct. 11	Do.
600	♂ ad.	.....do	Oct. 23	Do.
659	♂ ad.	.....do	Nov. 5	Do.
755	Jun.	.....do	July —	Do.

9. *Sialia arctica*, Sw.—Rocky Mountain Bluebird.

Apparently much rarer than the preceding species; indeed, I am not positive that I detected its presence at all, though a flock of Bluebirds seen in the high Sierras late in October were supposed to be of this species. This seems the more probable, as Dr. Cooper speaks of finding it numerous about Lake Tahoe and the summits of the Sierras in September.

SYLVIDÆ.—SYLVIAS.

10. *Regulus calendula*, (L.)—Ruby-crowned Kinglet.

This species is very abundant during the migrations, and may perhaps be yet found breeding in the high mountains of Southern California, as it probably does in the more northern half of the State.

No.	Sex.	Locality.	Date.	Collector.
506	♂	Near Mount Whitney, Cal	Sept. 26	H. W. Henshaw.
519	♂ jun.	.....do	Oct. 3	Do.

11. *Polioptila caerulea*, (L.)—Blue-gray Gnatcatcher.

The neighborhood of Fort Tejon was the only locality where this Gnatcatcher was seen. It was here particularly numerous, the bushes along the sides of the cañons being for some reason or other especially favored by their numbers. Neither here nor elsewhere was the closely-allied species *P. melanura* detected.

No.	Sex.	Locality.	Date.	Collector.
257	♀ jun.	Fort Tejon, Cal	July 27	H. W. Henshaw.
324	♂ jun.	.....do	Aug. 8	Do.
325	♂ jun.	.....do	Aug. 8	Do.
323	♂ jun.	.....do	Aug. 8	Do.
326	♀ jun.	.....do	Aug. 8	Do.
327	♀ jun.	.....do	Aug. 8	Do.

CHAMÆODÆ.—GROUND WRENS.

12. *Chamœa fasciata*, Gamb.—The Ground Wren.

Chamœa fasciata, Bd., B. N. A., 1858, 370.—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 191.—Coop., B., Cal., i, 1870, 39.—Coues, Key N. A. B., 1872, 79.—B., B., & R., N. A. B., i, 1874, 84.—Nelson, Proc. Bost. Soc. Nat. Hist., vol. xvii, 1875, 356 (California).

The Ground Wren appears to inhabit Southern California at large, and was detected by us at several widely-separated points both in the Coast range and the Sierras. Its

habits are a queer compound, and, though often suggestive of the Titmice, with which, too, its colors are somewhat correspondent, they yet resemble still more closely the Wrens, while the bird has characteristics borrowed from neither of its prototypes, but all its own.

I first saw the species in July, in a tangled growth of vines and bushes, close to the seashore near Santa Barbara. So careful, however, were they to keep themselves close within the friendly shelter of matted undergrowth that, though I made out from their voluble sputterings that a whole family was there congregated, I was unable to push a very close acquaintance. Subsequently I found another group in a small cluster of willows that fringed a mountain-rivulet near Fort Tejon. A few faint, querulous, sputterings from the center of the clump first attracted my attention, and, sitting down, I awaited patiently till I could catch a glimpse of their authors. After a few moments further silence on my part they began to approach nearer and nearer, till, ere long, I saw one little brown bunch of feathers balancing itself on the upright stem of a willow and peering cautiously about, all the while communing with itself and its fellows in quaint undertones. They appear to be fond of each others' society, and socially inclined toward other birds of very different habits, for I never saw or heard one without soon learning of the presence of others hard by, while, late in the fall, I often found several adding their quota to the flocks of Sparrows and Snowbirds in their journeys through the chaparral thickets on the mountain-sides.

They spend most of their time seeking food about the roots of bushes, and especially apt were they to be found in willow-clumps along the stream. Enough of their time is passed upon and near the ground to make the name of Ground Wren an appropriate one.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
380	♀ ad.	Tejon Mountains, Cal.	Aug. 17	H. W. Henshaw.	1.27	3.22	0.40	1.00
399	♂ ad.	do	Aug. 19	do	2.43	3.98	0.42	1.04
400	♀ ad.	do	Aug. 19	do	2.40	3.60	0.40	1.03
688	♂	Walker's Basin, Cal.	Nov. 10	do	2.40	3.40	0.43	1.00
704	♂ ad.	do	Nov. 10	do	2.45	3.73	0.43	1.00
705	♀	do	Nov. 11	do	2.35	3.58	0.43	0.88

PARIDÆ.—TITMICE.

13. *Lophophanes inornatus*, (Gamb).—Gray-tufted Titmouse.

This species appears to be a resident throughout Southern California, and is numerous here, as indeed almost everywhere in the Far West.

No.	Sex.	Locality.	Date.	Collector.
146	♂ jun.	Santa Barbara, Cal.	June 29	H. W. Henshaw.
249	♂	Ojai Creek, Cal.	July 17	Do.
264	♂	Fort Tejon, Cal.	July 27	Do.
322	♀	do	Aug. 7	Do.
353	♂ jun.	do	Aug. 10	Do.
393	♂ ad.	do	Aug. 17	Do.
658	♀	Walker's Basin, Cal.	Nov. 5	Do.

14. *Parus montanus*, Gamb.—Mountain Chickadee.

This appears to be the commonest representative of its tribe in Southern California, inhabiting chiefly the coniferous regions, and rarely descending to the low country.

The *Parus occidentalis* appears not to occur in the southern portion of the State; none at least were detected by us, nor do I find it quoted from this region. Its proper habitat is the Columbia River region and to the northward.

No.	Sex.	Locality.	Date.	Collector.
489	♀	Near Mount Whitney, Cal.	Sept. 19	H. W. Henshaw.
490	♂ jun.	do	Sept. 19	Do.
522	♂	North Fork Kern River, Cal.	Oct. 7	Do.
523	♀	do	Oct. 7	Do.
524	♂	do	Oct. 7	Do.
525	♂	do	Oct. 7	Do.
550	♀	Near Mount Whitney, Cal.	Oct. 10	Do.

15. *Psaltriparus minimus*, (Towns).—Least Titmouse.*Parus minimus*, Townsend, Jour. A. N. Sci. Phila., vii, 11, 1837, 190.*Psoltriparus minimus*. Bd., B. N. A., 1858, 397.—Coop. & Suckl., P. R. R. Rep., vol. xii, pt. 11 1860, 189.—Coop., B. Cal., i, 1870, 48.—Coues, Key N. A. B., 1872, 82.—B., B., & R., N. A. B. 1874, 109.—Nelson, Proc. Bost. Soc. Nat. Hist., vol. xvii, 356 (California).*Psaltria minima*, Heerman, P. R. R. Rep., xvi, 38.

This Titmousc, in external appearance so much like the allied form var. *plumbeus* from Arizona and the Southern Rocky Mountains, is its exact counterpart in habits and notes. Like that bird, it shuns the coniferous trees for which most of the family are so partial, and is found in the shrubbery and chaparral of the open country, particularly on the edges of cañons and along the broken, rocky ridges. In large flocks of so many individuals that the bushes seem sometimes fairly laden with the tiny busy-bodies, they move rapidly over the country, launching themselves in short flights from clump to clump, their notes telling of their whereabouts and serving to keep the flock well together. The sight of a wounded or dead comrade is sufficient to put the whole company in a flutter of commotion, and as they flock in to inspect their unfortunate associate their cries are redoubled, while they descend to the ground and vainly endeavor to ascertain the cause of the trouble and to be of assistance.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
64	♂	Santa Barbara, Cal.....	June 25	H. W. Henshaw.	1.80	2.16	0.28	0.63
112	♂ jun.	do	June 27	do	1.98	2.14	0.29	0.62
113	♂	do	June 27	do	1.75	2.05	0.29	0.63
114	♂ jun.	do	June 27	do	1.85	2.12	0.29	0.63
115	♂ ad.	do	June 27	do	1.85	2.17	0.30	0.63
305	♀	Fort Tejon, Cal	Aug. 7	do	1.77	2.07	0.27	0.68
306	♀	do	Aug. 7	do	1.77	2.05	0.29	0.65
607	♂ ad.	do	Aug. 7	do .....	.....	.....	.....	.....
758	ad.	do	Aug. 7	do .....	.....	.....	.....	.....
669	♂	Walker's Basin, Cal	Nov. 10	do	1.92	2.18	0.30	0.60
675	♀	do	Nov. 10	do	1.95	2.16	0.26	0.59
676	♂	do	Nov. 10	do	1.98	2.18	0.29	0.63
677	♂	do	Nov. 10	do	1.93	2.30	0.27	0.60
678	♀	do	Nov. 10	do	1.88	2.17	0.27	0.63
679	♂	do	Nov. 10	do	1.93	2.25	0.30	0.63
680	♂	do	Nov. 10	do	1.90	2.15	0.30	0.63
681	♂	do	Nov. 10	do	1.98	2.16	0.26	0.63
682	♂	do	Nov. 10	do	1.88	2.25	0.28	0.70
684	♂	do	Nov. 10	do	1.90	2.20	0.28	0.64
686	♂	do	Nov. 10	do	1.90	2.20	0.28	0.67
687	♀	do	Nov. 10	do	1.95	2.30	0.30	0.63
685	♂	do	Nov. 10	do	1.97	2.28	0.30	0.66
756	.....	do	Nov. 10	do	1.92	2.15	0.26	0.62
757	.....	do	Nov. 10	do	1.93	2.28	0.28	0.63

SITTIDÆ.—NUTHATCHES.

16. *Sitta carolinensis*, Gm., var. *aculeata*, Cass.—Slender-billed Nuthatch.

This species was found numerously in the pine region of both the Coast and Sierra ranges. I am inclined to think it is a resident in the mountains well down to the southern border of the State, as is the case in Arizona.

No.	Sex.	Locality.	Date.	Collector.
554	♂	Near Mount Whitney, Cal.....	Oct. 10	H. W. Henshaw.
555	♀	do	Oct. 10	do

17. *Sitta canadensis*, L.—Red-bellied Nuthatch.

This Nuthatch is possessed of a range considerably more northerly than any of the others of the family. Its occurrence, therefore, in the southern sierras is to be looked upon perhaps as rather unusual, and possibly it may be only found here as migrant and in winter. I found it breeding, however, in Southern Colorado, where it was not rare, which would render the supposition of it remaining in the high mountains of Southern California more probable. It appeared to be not uncommon in the pine region near Mount Whitney in October.

No.	Sex.	Locality.	Date.	Collector.
528	♀ jun.	Near Mount Whitney, Cal.....	Oct. 7	H. W. Henshaw.
38	♀ jun.	do	Oct. 9	do

18. *Sitta pygmaea*, Vig.—California Nuthatch.

This is by far the most abundant of the three species seen in California, and was common everywhere where the presence of pines affords them the hunting-grounds they most affect.

CERTHIIDÆ.—CREEPERS.

19. *Certhia familiaris*, L., var. *americana*, Bon.—Brown Creeper.

The Creeper breeds in the mountains of Southern California, where I took a young bird in the first plumage near Fort Tejon, August 2. It is, however, not common till late in the fall, when their numbers are increased by the arrival of migrants from more northern breeding-grounds.

No.	Sex.	Locality.	Date.	Collector.
759	♂	Tejon Mountains, Cal	Aug. 2	H. W. Henshaw.

TROGLODYTIDÆ.—WRENS. .

20. *Campylorhynchus brunneicapillus*, Lafr.—Cactus Wren.

Only in a few localities was this species met with, though its absence in Southern California as high as latitude 35° or 36° may be attributed chiefly to the lack of cactus plains, the cacti being almost a necessity in the domestic economy of the bird, both because these plants furnish it with its favorite hunting-grounds, and because it is in their branches that they love to place their nests. Up to the latitude indicated the species may be looked for with confidence whenever is found a district well supplied with these plants. One or two individuals were shot a few miles northeast of Kernville, but with plumage in such a state of moult that they were not considered worth preserving.

21. *Salpinctes obsoletus*, (Say).—Rock Wren.

The Rock Wren is perhaps not as abundant throughout Southern California as in many portions of the central region, yet it is found here and there in varying numbers, inhabiting the rocky, sterile, waste lands, which few other species care to share with it. It was noted also on the island of Santa Cruz.

No.	Sex.	Locality.	Date.	Collector.
633	♀	Near Sunday Peak, Cal	Oct. 25	H. W. Henshaw.
703	♀	Walker's Basin, Cal	Nov. 10	....do

22. *Catherpes mexicanus*, (Swains.), var. *conspersus*, Ridgw.—White-throated Rock Wren.

Probably the latitude of San Francisco forms about the northward limit of this species, thus coinciding with its known extension in the interior. It was detected by our parties as far north as the neighborhood of Mount Whitney, where it was tolerably numerous, being only seen among the broken masses of rocks that lie at the bases of the perpendicular cliffs or along their faces. It was detected, too, at various points in the Coast range, so that its diffusion over Southern California may be said to be general.

Of all its tribe, save perhaps the Winter Wren, this species is the most liable to be overlooked, where, too, it may be tolerably common. To a preference for the wild solitudes of the mountains it adds a shy, suspicious nature, which prompts it to hide away from observation and all chance of danger whenever anything of a suspicious character is observed.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
706	♂	Walker's Basin, Cal	Nov. 10	H. W. Henshaw.	2.30	2.25	0.85	0.71

23. *Troglodytes bewickii* (Aud.), var. *spilurus*, (Vigors).—Western Mocking-bird.*Troglodytes spilurus*, Vig., Zool. Beechey's Voyage, 1839, 18, pl. 4, f. 1 (California).*Thryothorus spilurus*, Coop., B. Cal., i, 1870, 69.*Troglodytes bewickii*, Newb., P. R. R. Rep., vi, 1857, 80.—Herm., ibid., x, 1859, pt. vi, 40.—Coop. & Suckl., ibid., vol. xii, pt. ii, 1860, 189.*Thryothorus bewickii*, var. *spilurus*, Bd., Rev. N. A. B., 1864, 126.—Coues, Key N. A. B., 1872, 86.—B., B., & R., N. A. B., 1874, 147.—Nelson, Proc. Boston Soc. Nat. Hist., vol. xvii, 357 (California).

In one or another of its three varieties, this bird is represented quite across the United States. The Bewick's Wren in the east, and its white-bellied variety (var. *cucogaster*) in the middle region, are both quite southern in their habitats, much more so than the extreme western form (var. *spilurus*), which, according to Dr. Cooper, winters in the mild regions as far to the north as Puget Sound.

Throughout the southern half of California it is a common resident during the summer, preferring to inhabit the more elevated regions, and descending thence to the lowlands to pass the winter.

It is a bird of the rather open districts, at least as compared with some others of the family, and, when its breeding duties have been fulfilled, wanders a great deal over the country at large. It is apt to be found in company with the restless flocks of Sparrows and Snowbirds, their general habits of keeping in bushy localities being sufficient y like its own to admit of this companionship.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
385	♀ jun.	Tejon Mountains, Cal	Aug. 17	H. W. Henshaw .	1.90	2.05	0.54	0.73
414	♀ .....	..... do	Aug. 19	..... do	1.94	2.18	0.54	0.71
595	♂	Kernville, Cal.....	Aug. 23	..... do	2.08	2.20	0.55	0.75
672	♂	Walker's Basin, Cal.....	Nov. 9	..... do	1.97	2.12	0.58	0.65
763	♀ jun.	Tejon Mountains, Cal	Aug. 2	..... do	2.05	2.10	0.58	0.68
764	jun....	.....	Aug. —	..... do	2.12	2.28	0.56	0.73

24. *Troglodytes aëdon*, Vieill., var. *parkmanni*, Aud.—Parkman's Wren.

The most numerous of its tribe in California, inhabiting the wooded sections everywhere.

No.	Sex.	Locality.	Date.	Collector.
80	♂ jun.	Santa Barbara, Cal.....	June 26	H. W. Henshaw.
314	♂ jun.	Fort Tejon, Cal	Aug. 7	..... do
463	♂	Near Mount Whitney, Cal	Sept. 10	..... do
762	jun....	California.....		

25. *Cistothorus palustris*, Wils., var. *paludicola*, Bd.

This Marsh Wren is abundant in Southern California, especially in fall. Though possessed of much the same palustrini habits as in the east, the bird is not nearly so particular here, but will be found to make the most of the circumstances. As tulle swamps and bogs grown up to rushes do not abound, the Wrens often take up their residence on the running streams, where covert is so scanty that their habits necessarily undergo considerable change.

No.	Sex.	Locality.	Date.	Collector.
414	♂	Fort Tejon, Cal	Aug. 19	H. W. Henshaw.

MOTACILLIDÆ.—WAGTAILS.

26. *Anthus ludovicianus*, (Gm.).—Titlark.

The Titlark occurs in California, at least in the southern portion, only as a late fall and winter visitant. It is then distributed over the State at large, moving in small parties here and there, its movement depending solely upon the food-supply. This it gleans from the stubble-fields, from the sandy shores of the rivers, and from the grassy plains.

No.	Sex.	Locality.	Date.	Collector.
584	♂	Near Kernville, Cal.....	Oct. 20	W. H. Henshaw.
585	♂	..... do	Oct. 20	Do.

SYLVICOLIDÆ.—WARBLERS.

27. *Helminthophaga celata*, Say.—Orange-crowned Warbler.

This Warbler is a common species in summer in Southern California, and indeed possesses in the West an almost unrestricted range, reaching on the coast from Cape Saint Lucas to the Yukon in Alaska, and being distributed throughout the interior. In Colorado, and the interior generally, it is in summer a bird of the mountains, reaching sometimes above the timber, and making its home in the scanty alpine growth of bushes about the lofty summits.

It is found, too, on the mountains of California (var. *lutescens*, Ridgway), but not at all exclusively. It was the only Warbler I found on the island of Santa Cruz, where it was quite numerous, and breeding in early June. The surface of this island, broken up and diversified by rocky ridges, is covered with a growth of chaparral, often very dense, and forms just the locality which this Warbler delights in. A female which I shot June 10 contained an egg which would have been ready for depositing in a few days.

No.	Sex.	Locality.	Date.	Collector.
17	♂ ad.	Santa Cruz Island, Cal.....	June 10	H. W. Henshaw.
18	♀ ad.	.....do.....	June 10	Do.
277	♀	Fort Tejon, Cal.....	Aug. 2	Do.
508	♂	Near Mount Whitney, Cal.....	Sept. 26	Do.

28. *Dendroica aestiva*, (Gm.).—Yellow Warbler.

A common species about Los Angeles in June. It breeds and is quite numerous through the northern half of the State, being confined entirely to the low districts.

No.	Sex.	Locality.	Date.	Collector.
352	♂ jun.	Fort Tejon, Cal	Aug. 10	H. W. Henshaw.

29. *Dendroica auduboni*, (Towns.).—Audubon's Warbler.

This Warbler does not appear to remain in the mountains of California during the summer, as it does in Colorado and Arizona, but repairs farther north to rear its young. It may yet remain to be detected in the high forests in the northern half of the State.

In the neighborhood of Mount Whitney it was common in September, being then on its way south. The common Yellow-rump (*D. coronata*) has not yet been found in California, though found at the Straits of Ituca in April by Dr. Cooper.

No.	Sex.	Locality.	Date.	Collector.
530	♂	Head Tule River, California.....	Oct. 7	H. W. Henshaw.
539	♀	Near Mount Whitney, Cal.....	Oct. 9	Do.
557	♀	Near Thunder Mountain, Cal.....	Oct. 10	Do.

30. *Dendroica nigrescens*, (Towns.).—Black-throated Gray Warbler.

I found this species common in the mountains, near Fort Tejon, in early August, and think they find here in the pine region their summer haunts. After leaving the Coast range, the species was not seen again, not even in the pineries of the high mountains near Mount Whitney.

No.	Sex.	Locality.	Date.	Collector.
765	♀ pin.	Tejon Mountains, Cal	Aug. 2	H. W. Henshaw.
766	jun.	.....do.....	Aug. 2	Do.
291	♂ jun.	.....do.....	Aug. 3	Do.
292	♂ jun.	.....do.....	Aug. 5	Do.
288	♂ jun.	.....do.....	Aug. 5	Do.
377	♀ ad.	.....do.....	Aug. 3	Do.
411	♀	.....do.....	Aug. 17	Do.
412	♀	.....do.....	Aug. 19	Do.

31. *Dendroica occidentalis*, (Towns.).—Western Warbler.

Concerning the occurrence of this Warbler in California, we have no very extended information. Dr. Cooper cites the capture of a single specimen at Petaluma, and considers the species a very rare one.

A single individual, taken near the head of Tule River in October, was the only one I saw. It probably then uses the Rocky Mountains as a highway in its spring and fall journeyings to and from higher latitudes to breed. It was quite common at Mount Graham, Arizona, in September of 1874, there affecting exclusively the spruce and fir woods.

No.	Sex.	Locality.	Date.	Collector.
537	♂	Head Tule River, Cal	Oct. 9	H. W. Henshaw.

32. *Geothlypis trichas*, (L.).—Maryland Yellowthroat.

Apparently not very common, though distributed pretty evenly over the southern portion of the State. Notes and habits as at the East. The Macgillivray's Warbler (*G. macgillivrayi*) was not detected by us, from which I infer its general rarity in the southern portion of the State. It, however, occurs here, as it is given from several localities by Dr. Cooper; also noted at Nevada City by Mr. Nelson.

No.	Sex.	Locality.	Date.	Collector.
431	♂ jun.	Walker's Basin, Cal	Aug. 28	H. W. Henshaw.
432	♂ jun.	.....do	Aug. 28	Do.

33. *Icteria virens*, (L.), var. *longicauda*, (Lawr.).—Long-tailed Chat.

The Chat is wide-spread over Southern California, where, however, we nowhere found it abundant. It inhabits the undergrowth and thickets of the streams, from the friendly shelter of which it rarely ventures forth. It is one of the noisiest of our small birds, and one cannot long remain in the vicinity of a spot inhabited by a pair without being made aware of the fact by their noisy outpourings.

No.	Sex.	Locality.	Date.	Collector.
48	♂ ad.	Santa Barbara, Cal	June 25	H. W. Henshaw.
82	♂ ad.	.....do	June 26	Do.
293	♂ jun.	Tejon Mountains, Cal	Aug. 3	Do.

34. *Myiodioctes pusillus*, (Wils.), var. *pileolatus*, (Ridgw.).—Western Blackcap.

While at Los Angeles, the middle of June, I found this little bird not uncommon in the swampy thickets, just the places, in fact, most frequented by it during the migrations. They were in full song, and their short, rather faint ditties were heard as they swept in short flights about the extremities of the branches, snapping up their flying food.

The late date at which they were noted seems to preclude the possibility of their being mere migrants, though this departure from their usual habits is strange enough, when this low altitude be compared with the high mountains they resort to in the interior region.

About the middle of August they became common, moving southward from the breeding-grounds in the far north. The bulk of these, however, are the true *M. pusillus*.

No.	Sex.	Locality.	Date.	Collector.
336	♂ jun.	Fort Tejon, Cal	Aug. 9	H. W. Henshaw.
511	♀ ad.	Near Mount Whitney, Cal	Sept. 26	Do.

HIRUNDINIDÆ.—SWALLOWS.

35. *Progne subis*, (L.).—Purple Martin.

Of apparently not so general distribution in Southern California as throughout the territory of the interior region, occurring, however, in colonies here and there.

36. *Petrochelidon lunifrons*, (Say).—Cliff Swallow.

Ocours over the country at large, being perhaps fully as abundant along the seacoast as in the interior.

37. *Hirundo horreorum*, Barton.—Barn Swallow.

This Swallow is far less numerous than the preceding, though on the coast, at least, it is not rare. On the island of Santa Cruz a few pairs were seen, and still clinging to their primitive mode of living. Their nests were built either in caverns or in the sheltered depressions on the faces of the rocky cliffs.

38. *Tachycineta thalassina*, (Sw.).—Violet-green Swallow.

Along the coast this Swallow is very numerous, resorting, as noted by Dr. Cooper almost exclusively to the oak-groves, where, in the natural knot-holes and the deserted homes of Woodpeckers, it builds its nest. It was abundant in September in the high meadows near the base of Mount Whitney, though whether the species is limited to the Coast-range region in summer, and only occurs in the sierras as a migrant, I am unable to say.

No.	Sex.	Locality.	Date.	Collector.
118	♂ ad.	Santa Barbara, Cal.....	June 28	H. W. Henshaw.
139	♂ ad.	.....do.....	June 29	Do.
140	♀ ad.	.....do.....	June 29	Do.
465	♂	Near Mount Whitney, Cal.....	Sept. 10	Do.
754	♂ ad.	Tejon Mountains, Cal.....	Aug. 2	Do.

39. *Stelgidopteryx serripennis*, (Aud.).—Rough-winged Swallow.

Occurs commonly through Southern California, its distribution being regulated only by the presence or absence of suitable localities. Frequents chiefly the banks of the rivers.

VIREONIDÆ.—VIREOS.

40. *Vireo gilvus*, (Vieill.), var. *swainsoni*, Bd.—Western Warbling Vireo.

Occurs commonly in California, inhabiting the deciduous trees of the low districts, and extending upward on the timbered mountains to at least 10,000 feet.

No.	Sex.	Locality.	Date.	Collector.
130	♂ ad.	Santa Barbara, Cal.....	June 28	H. W. Henshaw.
289	♀ ad.	Tejon Mountains, Cal.....	Aug. 3	Do.

41. *Vireo solitarius*, (Wils.).—Solitary Vireo.

Southern California does not appear to be included in the range of this species, except in so far as it occurs there during the migrations. Further north, on the Columbia River, they are, according to Dr. Cooper, common in summer.

No.	Sex.	Locality.	Date.	Collector.
376	♀	Tejon Mountains, Cal.....	Aug. 17	H. W. Henshaw.

42. *Vireo solitarius*, (Wils.), var. *cassini*.—Cassin's Vireo.

In the mountains, near Fort Tejon, the locality from which the first specimen was obtained, I took a single individual in August. This was the only one seen, and I am

inclined to think that with the preceding species the Cassin's Vireo retires in summer to more northern breeding-grounds.

No.	Sex.	Locality.	Date.	Collector.
376	♀	Tejon Mountains, Cal.....	Aug. 17	H. W. Henshaw.

43. *Vireo solitarius*, (Wils.), var. *plumbeus*, Coues.—Western Solitary Vireo.

I procured a single specimen of this Vireo in the mountains near Fort Tejon, August 1. It is in much-worn plumage, and probably had bred in this locality.

The species is, however, one belonging more particularly to the Southern Rocky Mountains.

No.	Sex.	Locality.	Date.	Collector.
767	♀ ad.	Tejon Mountains, Cal.....	Aug. 1	H. W. Henshaw.

44. *Vireo pusillus*, Coues.—Least Vireo.

The Least Vireo was the most abundant of its tribe about Los Angeles in June, and their notes, remarkable only for their oddity and quaintness, were constantly heard issuing from the thickets, often several males singing at a time. The bird seems to be the counterpart of the eastern *Vireo belli*. It is never seen in the open, and very rarely in the taller, trees, but keeps within the shelter of the shrubbery, either along a stream or in the swamps. It is very active and restless, and, numerous as they were, I found it very difficult to get even a glimpse of them, as they flitted about, now just over the ground, now in the tops of the young trees, that grew so thickly as to limit my view to the space of a few yards.

As far north as Santa Barbara and Fort Tejon they were quite numerous, and their range will very probably be found to reach as far north as San Francisco.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
24	♂ ad.	Los Angeles, Cal.....	June 17	H. W. Henshaw.	2.12	2.25	0.41	0.72
258	♂ jun.	Santa Barbara, Cal.....	July 7	do	2.08	2.22	0.38	0.77
312	♀ jun.	Fort Tejon, Cal	Aug. 7	do	2.07	2.05	0.42	0.74
335	.....	do	Aug. 9	do	2.20	2.14	0.40	0.75

45. *Vireo huttoni*, Cassin.—Hutton's Vireo.

Vireo huttoni, Cassin, Pr. A. N. Sc. Phila. v, Feb., 1851, 150.—Bd., B. N. A., 1858, 339.—Coop., B. Cal., i, 1870, 121.—Coues, Key N. A. B., 1872, 123.—B., B., & R., N. A. B., i, 1874, 387.

This species is one of the least known of all our Vireos; nor is this owing entirely to its rarity, for at Santa Barbara, in June, it was quite common, and according to Dr. Cooper this is true in other parts of California, it wintering plentifully as high as latitude 38°. It breeds, I am inclined to believe, through the whole of Southern California.

In habits it is arboreal, as much so, judging from those I saw, as the Warbling Vireo. It frequented the oaks exclusively, and was at this season entirely silent, so that, though I watched them for the express purpose of listening to their notes, I heard not a single strain. This was probably due to the fact that their broods were just out and required their full attention.

All their movements were marked with a quiet deliberation as they silently moved about the ends of the branches, searching them with the utmost care for food.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
769	♀ ad.	Santa Barbara, Cal.....	June 14	H. W. Henshaw.	2.45	2.15	0.43	0.76
58	♂ ad.	do	June 25	do	2.43	2.09	0.42	0.75
109	♂ jun.	do	June 27	do	2.35	2.10	0.39	0.73
110	♀ ad.	do	June 27	do	2.38	2.04	0.43	0.73
111	♂ ad.	do	June 27	do	2.29	2.07	0.42	0.76
135	♂ jun.	do	June 29	do	2.35	2.04	0.42	0.75
152	♂ jun.	do	June 29	do	2.40	2.12	0.43	0.73
245	♀ ad.	do	July 17	do	2.45	2.15	0.40	0.72

AMPELIDÆ.—CHATTERERS.

46. *Phainopepla nitens*, (Sw.).—Black Flycatcher.

I saw this species on but few occasions. They are, however, not rare in the southern half of the State. They inhabit the bushy cañons, and are found much about the oaks, upon which they find the berries of the mistletoe. In fall these and other kinds of berries form their chief sustenance, varied with insects which they capture on the wing. They are among the shyest of the small birds.

47. *Miadestes townsendi*, (Aud.).—Townsend's Solitaire.

This species probably resorts to the high mountains, as in the interior region, to pass the summer. I saw none till in September; when in the Sierras, they appeared here and there noiselessly pursuing their avocations. Though usually a bird of very unsocial disposition, the abundance of food at any special locality, as berries, attracts them in numbers, when they seem inclined to live more or less in company, and in late fall are apt to be seen in parties of four or five individuals. They never, however, flock, in the strict meaning of the word.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
464	♂	Near Mount Whitney, Cal.....	Sept. 26	H. W. Henshaw.	4.45	4.24	0.52	0.79
498	♀	.....do.....	Sept. 26	....do.....	4.49	4.09	0.50	0.82
498 A	♀	.....do.....	Sept. 26	....do.....	4.59	4.15	0.47	0.83
499	♂	.....do.....	Sept. 26	....do.....	4.58	4.12	0.48	0.80
500	♂	.....do.....	Sept. 26	....do.....	4.57	4.18	0.49	0.82
501	♀	.....do.....	Sept. 26	....do.....	4.55	4.16	0.48	0.82
502	♂	.....do.....	Sept. 26	....do.....	4.53	4.15	0.47	0.82

LANIIDÆ.—SHRIKES.

48. *Collurio ludovicianus*, (L.), var. *excubitoroides*.—Swain's White-rumped Shrike.

This Shrike is numerous in California, where its habits of life throughout appear not different from its usual mode of existence elsewhere. As noticed by Professor Baird, in his Review, there is observable in the birds from the west coast an appreciable difference from those of the interior, which latter represent what may be called the normal type of coloration of the var. *excubitoroides*. In our specimens from California the ash above is darker, the hoariness of the forehead of less extent, the white of scapulars more restricted. All the specimens, however, taken on the mainland have the white rump clearly defined. In this connection, two young birds in nesting plumage taken on Santa Cruz Island are especially noteworthy. These appear in all respects to be typical *ludovicianus*. In the depth of the plumbeous shade above and along the sides, in the lack of any hoariness on the forehead, and, above all, in the absence of any whiteness of the rump, this being like the back, they exactly resemble young birds from Florida.

No.	Sex.	Locality.	Date.	Collector.
87	♀	Santa Barbara, Cal.....	June 26	H. W. Henshaw
205	♀ jun.	.....do.....	July 6	Do.
467	♂ jun.	Near Mount Whitney, Cal .....	.....	Do.
750	.....	.....do.....	.....	Do.
625	♀	Kernville, Cal.....	Oct. 27	Do.
<i>Ludovicianus.</i>				
15	♂	Santa Cruz Island, Cal.....	June 10	Do.
16	♂	.....do.....	June 10	Do.

TANAGRIDÆ.—TANAGERS.

49. *Pyranga ludoviciana*, (Wils.).—Louisiana Tanager.

In one of the small cañons issuing from the mountains near Santa Barbara I found several of these Tanagers in July, at which time they were feeding their young. Elsewhere in Southern California they were most unaccountably rare, and, all told, I do not think I saw over a dozen during the entire summer. Probably the bulk of their numbers pass farther north to breed.

FRINGILLIDÆ.—FINCHES.

50. *Carpodacus purpureus*, (Gm.).—Purple Finches.

This species appears to be at least not a common one in Southern California, a single specimen being all obtained or seen by us. Dr. Cooper speaks of finding them on the summits of the Coast range, toward Santa Cruz, in May, where they had nests.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
563	♀	Near Mount Whitney, Cal.	Oct. 10	H. W. Henshaw...	3.00	2.34	0.45	0.72

51. *Carpodacus frontalis*, (Say).—House Finch.

In Southern California, in summer this Finch is perhaps the most numerous of any of the small birds. Their diffusion is very general, the mountains alone being unvisited by them. On the island of Santa Cruz, their numbers are as great as on the mainland. They are always found in greatest numbers in the vicinity of houses, where there are scarcely any bounds to their familiarity. On the uninhabited portions of the island a few had taken up their abode, resorting to little niches in the face of cliffs to place their nests. Their disposition toward each other is sociable in the extreme, and wherever found they will be seen to have established themselves into communities, often of many individuals, while the air is fairly filled with their songs, which continue from morning to night.

No.	Sex.	Locality.	Date.	Collector.
72	♀ ad.	Santa Barbara, Cal	June 26	
73	♂ ad.	do	June 26	
74	♂ jun.	do	June 26	
129	♂ ad.	do	June 28	
150	♂ ad.	do	June 29	
151	♂ ad.	do	June 29	
159	♂ ad.	do	June 29	
160	♂ ad.	do	July 1	
161	♂ ad.	do	July 1	
248	♀ ad.	Walker's Basin, Cal	July 1	
342	♀ jun.	Fort Tejon, Cal	July 17	
770	♂ ad.	Santa Barbara, Cal	Aug. 9	

52. *Chrysomitris tristis*, (Linn.).—Goldfinch.

This is an abundant species throughout Southern California, avoiding only the high mountainous districts. It was particularly numerous at Los Angeles, and as early as the middle of June was breeding plentifully. Their eggs at this time were in most cases far advanced toward hatching, though in one instance fresh eggs were found, and in another the nest had been just begun.

In a dense willow-thicket within an area of a few yards no fewer than seven of their nests were counted. They were all placed quite low, the highest about 12 feet from the ground, and, save in being less compactly woven, resembled the usual style of structure in the East. The eggs are of an unspotted greenish-white color.

No.	Sex.	Locality.	Date.	Collector.
26	♀ ad.	Los Angeles, Cal	June 17	H. W. Henshaw.

53. *Chrysomitris psaltria*, (Say).—Arkansas Finch.

Of the three species inhabiting Southern California, this Goldfinch appears to be the most widely spread, as perhaps also the most numerous. It was seen at many different localities, and, like the other two, inhabits the valleys. The seeds of grasses and weeds appear to form the chief part of its food.

No.	Sex.	Locality.	Date.	Collector.
247	♀ jun.	Ojai Creek, Cal	July 17	H. W. Henshaw.
294	♂ juv.	Fort Tejon, Cal	Aug. 3	Do.
338	♂ ad.	..... do	Aug. 9	Do.
338	♂ ad.	..... do	Aug. 9	Do.
339	♂ jun.	..... do	Aug. 9	Do.
340	Jun.	..... do	Aug. 9	Do.
341	♀ jun.	..... do	Aug. 9	Do.
344	♀ jun.	..... do	Aug. 9	Do.
426	♂ jun.	Walker's Basin, Cal	Aug. 27	Do.
427	♀ ad.	Fort Tejon, Cal	Aug. 28	Do.
430	♂ ad.	Walker's Basin, Cal	Aug. 28	Do.
433	♀ jun.	..... do	Aug. 28	Do.
434	♀ jun.	Fort Tejon, Cal	Aug. 28	Do.
435	♀ jun.	..... do	Aug. 28	Do.

54. *Chrysomitris lawrencii*, (Cassin).—Lawrence's Goldfinch.

Carduelis lawrencii, Cassin, Proc. A. N. Sc., v, Oct., 1859, 105, pl. v (California).—Heermann, P. R. R. Rep., x, 1859, vi, 50, (California).

Chrysomitris lawrencii, Bd., B. N. A., 1858, 424.—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 191.—(Ft. Tejon, Cal.).—Coop., B. Cal., i, 1870, 121.—Coues, Key N. A. B., 1872, 132.—B., B., & R., N. A. B., 1874, 478.

This Goldfinch appears to be more particularly a Californian species, and I do not find it reported from outside the State, except from Camp Whipple, Arizona. Its distribution here seems confined to a comparatively narrow area coastwise, from the southern border to the most northern portions of the State, where Heermann gives it as very abundant throughout the mining-regions. It thus may, and probably does, extend somewhat into Oregon, though it has not been detected at Camp Harney by Lieutenant Bendrie.

Near Santa Barbara, which was the only place where I met with the bird, it was a numerously represented species, though even there my observations respecting it were confined to a single locality, the neighborhood of some springs of fresh water to which the birds resorted in great numbers all through the day to slake their thirst. They certainly did not breed in the immediate locality, and I was at a loss to imagine the particular attraction the spot had for them.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
53	♂ ad.	Santa Barbara, Cal	June 25	H. W. Henshaw ..	2.53	2.03	0.32	0.50
56	♂ ad.	..... do	June 25	....do	2.80	2.24	0.33	0.54
57	♂ ad.	..... do	June 25	....do	2.70	2.08	0.35	0.54
75	♂ ad.	..... do	June 26	....do	2.79	2.18	0.33	0.53
97	♂ ad.	..... do	June 27	....do	2.62	2.16	0.33	0.52
163	♂ ad.	..... do	July 1	....do	2.70	2.12	0.32	0.52
164	♂ ad.	..... do	July 1	....do	2.73	2.12	0.35	0.52
50	♀ ad.	..... do	June 25	....do	2.56	1.97	0.33	0.52
51	♀ ad.	..... do	June 25	....do	2.50	2.03	0.34	0.53
165	♀ ad.	..... do	July 1	....do	2.54	2.05	0.33	0.47
49	♂ jun.	..... do	June 25	....do	2.64	.....	.....	.....
52	♂ jun.	..... do	June 25	....do .....	.....	.....	.....	.....
54	♀ jun.	..... do	June 25	....do .....	.....	.....	.....	.....
55	♀ jun.	..... do	June 25	....do .....	.....	.....	.....	.....
76	♀ jun.	..... do	June 26	....do .....	.....	.....	.....	.....
62	♂ jun.	..... do	June 25	....do .....	.....	.....	.....	.....
98	♀ jun.	..... do	June 27	....do .....	.....	.....	.....	.....
99	♀ jun.	..... do	June 27	....do .....	.....	.....	.....	.....
100	♂ jun.	..... do	June 27	....do .....	.....	.....	.....	.....
176	♂ jun.	..... do	July 2	....do .....	.....	.....	.....	.....
177	♂ jun.	..... do	July 2	....do .....	.....	.....	.....	.....

55. *Chrysomitris pinus*, (Wils.).—Pine Finch.

In winter, the Pine Finch overspreads California, probably visiting all portions. It apparently does not, as in the same latitude in the interior, resort to the high mountains in summer, but all retire to the far north. In the interior, about Kernville and elsewhere, it was present the last of October in small flocks, finding in the weed-patches an abundance of food.

No.	Sex.	Locality.	Date.	Collector.
641	♀ jun.	Walker's Basin, Cal	Nov. 5	H. W. Henshaw.

56. *Passerculus savanna*, (Wils.), var. *alaudinus*, Bd.—Western Savanna Sparrow.

We have no positive proof of the occurrence of this variety in California in summer, and all the evidence I could obtain seems to point to the opposite conclusion.

During the fall migrations it makes its appearance from the North, and then occurs over the State at large.

I found it early in September on the streams high up in the mountains, near Mount Whitney, while in November it was exceedingly numerous about Oakland, across the bay from San Francisco, frequenting the plowed lands, gardens, and grassy fields everywhere, almost to the shore. Whether it ever is found in the salt-meadows along the shore I do not know, but believe it never does occur in such places, even during the migrations.

No.	Sex.	Locality.	Date.	Collector.
443	♀	Walker's Basin, Cal.....	Sept. 6	H. W. Henshaw.
510	♀	North Fork Kern River, Cal.....	Sept. 29	Do.
587	♀	Near Kernville, Cal.....	Oct. 20	Do.
588	♂	.....do.....	Oct. 20	Do.
594	♂	.....do.....	Oct. 23	Do.
713	♂	Walker's Basin, Cal.....	Nov. 11	Do.

57. *Passerculus savanna*, (Wils.), var. *anthinus*.—Fitlark Sparrow.

Passerculus anthinus, Bonaparte, Comptes Rendus, xxvii, Dec., 1853, 919 (Russian America).—Bd., B. N. A., 1858, 445.—Coop, B. Cal., i, 1870, 183.

Passerculus savanna var. *anthinus*, Coues, Key N. A. B., 1872, 136.—B., B., & R., N. A. B., i, 1874, 539.

This sparrow, so far as known, is confined to California,* where it inhabits exclusively the coast, being found in the salt-meadows and beds of rushes. Its habits seem to resemble very closely those of the eastern Savanna Sparrow (*P. savannas*) as seen under similar circumstances. They lie close hidden in the grass, rise with extreme reluctance, and fly with apparent difficulty to a short distance, alighting usually on the tops of the mattocks of grass, or upon the mazing reeds, there to reconnoiter for a moment ere taking refuge among the roots.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
101	♀ jun.	Santa Barbara, Cal	June 27	H. W. Henshaw.	2.57	2.00	0.43	0.80
103	♀ ad.	.....do.....	June 27	....do.....	2.40	1.90	0.46	0.74
104	♀ ad.	.....do.....	June 27	....do.....	2.45	1.80	0.46	0.77
105	♂ jun.	.....do.....	June 27	....do.....	2.65	2.15	0.43	0.79
106	♀ jun.	.....do.....	June 27	....do.....	2.54	2.00	0.47	0.79
112	♂ ad.	.....do.....	June 27	....do.....	2.64	2.03	0.47	0.83
119	♀ ad.	.....do.....	June 28	....do.....	2.40	.....	0.40	0.82
120	♂ ad.	.....do.....	June 28	....do.....	2.56	2.00	0.47	0.82
121	♀ ad.	.....do.....	June 28	....do.....	2.50	2.00	0.50	0.81
122	♂ ad.	.....do.....	June 28	....do.....	2.72	2.06	0.47	0.82
156	♀ ad.	.....do.....	July 1	....do.....	2.43	1.90	0.42	0.77
157	♀ ad.	.....do.....	July 1	....do.....	2.46	2.00	0.46	0.77
237	♂ ad.	.....do.....	July 8	....do.....	2.49	2.06	0.46	0.78

58. *Pooecetes gramineus*, (Gm.), var. *confinis*, Bd.—Grass Finch.

I did not meet with the Grass Finch in summer in Southern California, and believe with Dr. Cooper that if it breeds within the State, it is only in the more northern parts. Like the Lark Sparrow, it is more a bird of the dry interior regions, being found, however, over California during the migrations.

No.	Sex.	Locality.	Date.	Collector.
466	♀	Near Mount Whitney, Cal	Sept. 12	H. W. Henshaw.
630	♀	Near Kernville, Cal.....	Oct. 25	Do.

59. *Coturniculus passerinus*, (Wils.), var. *perpallidus*.—Western Yellow-winged Sparrow.

This Sparrow is chiefly a bird of the interior region, where it is rather southerly in its habitat. It has not hitherto been known certainly to occur on the Pacific coast.

* The locality of Bonaparte's type-specimen was probably transferred with that of *P. alaudinus*. (See B., B., & R., N. A. B.)

At Santa Barbara, directly on the coast, I found the species breeding, and took the young in nesting plumage the last of June. Elsewhere I did not see it, though, as it is a bird of very unobtrusive habits, it may have easily been overlooked; hence its diffusion over Southern California is by no means improbable.

No.	Sex.	Locality.	Date.	Collector.
142	Jun.	Santa Barbara, Cal.....	June 29	H. W. Henshaw.
162	♀ ad.	do	July 1	Do.

60. *Chondestes grammica*, (Say).—Lark Finch.

As might be expected from its almost universal dispersion over the West, the Lark Finch is found in California, wintering, according to Dr. Cooper, in the southern part of the State. That this is somewhat out of their usual range is shown by the fact of their general scarcity as compared with the great number to be seen in the interior sections.

61. *Zonotrichia leucophrys*, (Forst.).—White-crowned Sparrow.

This species is not known to breed in Alaska, or, indeed, within the Pacific coast region. I found it in the high sierras in September, in company with the succeeding variety, forming, however, but a very small proportion of the vast flocks of those birds. In common with some other species, as the *Passerculus alaudinus*, large numbers of this Sparrow in pursuing their migration southward in fall, instead of following a direct course, radiate out of the line, and are thus found far to the west and east of the region inhabited by them in summer.

A more notable instance of this irregular mode of migrating is seen in the *Junco oregonus*. This, though a species belonging to the western province, is found in fall and winter diffused over all the interior province, and to the edge of the eastern. In these cases it seems to be merely a question of the abundance of food which determines their path. In a great measure, independent of climatic conditions, the birds wander almost at will, wherever they find their wants most easily satisfied.

No.	Sex.	Locality.	Date.	Collector.
470	♂ ad.	Mount Whitney, Cal.....	Sept. 12	H. W. Henshaw.
471	♂ ad.	do	Sept. 12	Do.
491	♀ ad.	do	Sept. 19	Do.
495	♀ ad.	do	Sept. 21	Do.

62. *Zonotrichia leucophrys*, (Forst.), var. *intermedia*, Ridgw.

By the middle of September this bird had become very common in the sierras, and at an altitude of 12,000 feet was seen in large flocks feeding among the low willows and alpine shrubbery that fringe the little streams of this elevation. As we descended thence into lower regions, it grew still more abundant, till in the low valleys they numbered thousands. About San Francisco, the middle of November, they were seen in throngs in the shrubbery of the gardens, and they doubtless spend the winter here. This variety does not breed in California.

No.	Sex.	Locality.	Date.	Collector.
478	♂ jun.	Near Mount Whitney, Cal	Sept. 18	H. W. Henshaw.
479	♂ ad.	do	Sept. 18	Do.
480	♀ jun.	do	Sept. 19	Do.
481	♂ jun.	do	Sept. 19	Do.
482	♂ ad.	do	Sept. 19	Do.
483	♀ ad.	do	Sept. 19	Do.
484	♀ ad.	do	Sept. 19	Do.
485	♀ ad.	do	Sept. 19	Do.
486	♀ jun.	do	Sept. 21	Do.
492	♂ ad.	do	Sept. 21	Do.
494	♀ ad.	do	Sept. 21	Do.
503	♂ ad.	do	Sept. 26	Do.
549	♀ jun.	Near Kernville, Cal	Sept. 10	Do.
593	♂ jun.	do	Sept. 23	Do.
575	♂ jun.	do	Oct. 16	Do.
585A	♂ ad.	do	Oct. 20	Do.
585	♂ ad.	do	Oct. 19	Do.
586	♀ jun.	do	Oct. 20	Do.
660	♂ ad.	Walker's Basin, Cal	Nov. 5	Do.
591	♀ jun.	Near Kernville, Cal	Oct. 23	Do.
592	♂ ad.	do	Oct. 23	Do.

63. *Zonotrichia gambeli*, (Forst.).—Gambel's Finch.

The true Gambel's Finch is confined to the Pacific province, where it breeds as far to the north as Kodiak. I was unable to detect its presence in the mountains about Fort Tejon in summer, and I am inclined to believe that it does not breed in the sierras south at least of the latitude of San Francisco.

Among a large number of the preceding birds, shot near Mount Whitney in September, were only two of this variety. About San Francisco, too, where in November the other variety was so numerous, I succeeded in finding but a single pair, an adult and a young bird. They are thus probably quite local in their habitat, and resident to a great extent, though in their wanderings for food they extend some distance farther south in the fall and winter than their regular habitat.

No.	Sex.	Locality.	Date.	Collector.
485	♀ ad.	Near Mount Whitney, Cal	Sept. 19	H. W. Henshaw.
486	♀ jun.	.....do	Sept. 19	Do.

64. *Zonotrichia coronata*, Pallas.—Golden-crowned Sparrow.

Emberiza coronata, Pallas Zoog. Rosso-Asiat., ii, 1811, 44.

Zonotrichia coronata, Bd., B. N. A., 1858, 461.—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 191.—Coop. & Suckl., P. R. R. Rep., vol. 12, pt. ii, 1860, 201.—Coop., B. Cal., i, 1870, 197.—B., B., & R., N. A. B., ii, 1874, 573.—Nelson, Proc. Bost. Soc. Nat. Hist., vol. xvii, 359 (California).

Zonotrichia aurocapilla, Newb., P. R. R. Rep., vi, 1857, 88.

In its fall migration, this Sparrow appears to follow pretty exclusively the mountain-ranges, where it is found from their bases up to an altitude of about 6,000 or 7,000 feet, thus avoiding the higher summits and not descending into the valleys. It is a brush-loving species, and inhabits the thickest chaparral of oak-scrub or "blue brush," sometimes in flocks of its own kind, oftener in company with the other *Zonotrichia* and the *Pipilos*. Its habits differ in no noteworthy respect from those of its congeners. Its food, which in the fall consists almost entirely of the seeds of grasses and weeds, is obtained from the ground, the various species mingling together in perfect amity as they conduct their search. By the 10th of November most of the young birds had passed north, those remaining being for the most part in the adult plumage. Later in the fall and in winter their diffusion becomes more general. In company with the var. *intermedia*, they were seen in the hedge-rows and weed-patches about Oakland, where they spend the winter. Probably more or less remain in the mountains of Northern California during the summer. Heerman, as quoted, mentions finding a nest of this species near Sacramento.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
564	♀ ad.	Mountains near Kernville, Cal.	Oct. 16	H. W. Henshaw.	3.30	3.37	0.47	0.95
568	♂ ad.	.....do	Oct. 16	.....do	3.28	3.45	0.50	0.88
668	♂ ad.	Walker's Basin, Cal.	Nov. 9	.....do	3.20	3.48	0.50	0.95
609	♂ ad.	Mountains near Kernville, Cal.	Oct. 25	.....do	3.32	3.63	0.46	0.92
611	♀	.....do	Oct. 25	.....do	3.08	3.17	0.47	0.93
561	♂ jun.	.....do	Oct. 10	.....do	3.26	3.40	0.45	0.97
565	♂ jun.	.....do	Oct. 16	.....do	3.22	3.37	0.50	1.00
566	♀ jun.	.....do	Oct. 16	.....do	3.15	3.25	0.45	0.92
565	♂ jun.	.....do	Oct. 10	.....do	2.93	3.05	0.48	0.90
603	♀ jun.	.....do	Oct. 25	.....do	3.07	3.25	0.49	0.93
604	♀ jun.	.....do	Oct. 25	.....do	3.14	3.33	0.48	0.95
567	♀ jun.	.....do	Oct. 16	.....do				
605	♀ jun.	.....do	Oct. 25	.....do				
607	♀ jun.	.....do	Oct. 25	.....do				
608	♂ jun.	.....do	Oct. 25	.....do				
715	♀ jun.	.....do	Nov. 11	.....do				
540	♀ jun.	Near Whitney, Cal.	Oct. 10	.....do				
610	♂ jun.	Mountains near Kernville, Cal.	Oct. 25	.....do				
618	♀ jun.	.....do	Oct. 25	.....do				
614	♂ jun.	.....do	Oct. 25	.....do				
612	♀ jun.	.....do	Oct. 25	.....do				
613	♂ jun.	.....do	Oct. 25	.....do				
615	♂ jun.	.....do	Oct. 25	.....do				
616	♀ jun.	.....do	Oct. 25	.....do				
617	♂ jun.	.....do	Oct. 25	.....do				
569	♂ jun.	.....do	Oct. 16	.....do				
619	♂ jun.	.....do	Oct. 25	.....do				
695	♂ jun.	Walker's Basin, Cal.	Nov. 11	.....do				
696	♂ jun.	.....do	Nov. 10	.....do				
737	Jun.	Mountains near Kernville, Cal.	Oct. 25	.....do				

65. *Junco oregonus*, (Towns.).—Oregon Snowbird.

This Snowbird is probably a summer resident in the high mountains throughout California.

As late as August 19 I obtained the young fully fledged, though still retaining their nest plumage, in the mountains near Fort Tejon, where the species was very abundant. In September the number in the State is increased by the arrival of immense flocks from the north, when they overspread the whole country, remaining till the following spring.

No.	Sex.	Locality.	Date.	Collector.
274	♂ jun.	Mountains near Fort Tejon, Cal.....	Aug. 2	H. W. Henshaw.
275	♀ ad.	..... do	Aug. 2	Do.
407	♀ jun.	..... do	Aug. 19	Do.
452	♂ ad.	Mountains near Mount Whitney, Cal.....	Sept. 10	Do.
504	♂ ad.	..... do	Sept. 26	Do.
544	♀	..... do	Oct. 10	Do.
547	♀ ad.	..... do	Oct. 10	Do.
548	♀ ad.	..... do	Oct. 10	Do.
556	♀ ad.	..... do	Oct. 10	Do.
650	♂ ad.	..... do	Nov. 5	Do.

66. *Poospiza belli*, (Cassin).—Bell's Sparrow.

Emberiza belli, Cassin, Pr. A. N. Sc. Phila., v, Oct., 1850, 104, pl. iv, 41 (San Diego, Cal.).
Poospiza belli, Bd., B. N. A., 1858, 470.—Kennerly, P. R. R. Rep., x, 1859, 29.—Heerman, ibid., 46.—Coop., B. Cal., i, 1810, 204.

The Bell's Finch appears to be confined to the southern half of California, where it is a resident species. It inhabits to some extent the chaparral on the mountain-sides, but is more particularly a bird of the sage-brush plains, no spot being too desolate to suit the taste of this Sparrow. In the mountains near Fort Tejon, it breeds abundantly at an elevation of 5,000 or 6,000 feet. At this date, August 4, the young were just moulting and about to don the adult feathering.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
295	♀ jun.	Mountains near Fort Tejon, Cal	Aug. 4	H. W. Henshaw.	2.72	2.96	0.44	0.80
296	♂ jun.	..... do	Aug. 4	....do	2.74	2.88	0.38	0.81
297	♂ jun.	..... do	Aug. 4	....do	2.82	2.87	0.38	0.82
369	♂ jun.	..... do	Aug. 17	....do	2.75	2.91	0.37	0.80
378	♂ jun.	..... do	Aug. 7	....do	2.80	2.89	0.39	0.83
390	♂ ad.	..... do	Aug. 17	....do	2.75	2.88	0.37	0.81
391	♀	..... do	Aug. 18	....do	2.65	2.82	0.39	0.77
392	♀ ad.	..... do	Aug. 18	....do	2.63	2.75	0.35	0.74
749	.....	..... do .....	.....	....do	2.79	2.95	0.43	0.79

67. *Poospiza belli*, (Cassin), var. *navadensis*, Ridgw.—Artemisia Sparrow.

This well-marked variety of the Bell's Finch is found throughout the middle region, being limited in its westward extension by the Sierra Nevada, on the eastern slope of which it was found by Mr. Ridgway.

Though, in the strict meaning of the word, not a migratory species, these Sparrows do yet wander in the fall and winter to very considerable distances. As it is of a hardy nature, these journeys are undertaken more in quest of food than through the exigencies of climate; though, doubtless, both causes are, to some extent, operative.

It is hence the less surprising that this species should cross the range and be found in the winter on the ground occupied in summer by the other variety alone. At Kernville, I took a single individual, October 28, and saw others.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
636	♂ jun.	Near Kernville, Cal.....	Oct. 28	H. W. Henshaw...	3.13	3.04	0.43	0.86

68. *Spizella socialis*, (Wils.), var. *arizonæ*, Coues.—Western Chipping Sparrow.

According to Dr. Cooper, the Chipping Sparrow is an abundant bird in Northern California, and according to our observations it is pretty well diffused too in the Southern half of the State. The young and old were seen in great numbers in the mountains in the vicinity of Fort Tejon in early August. This species was also seen in June on the island of Santa Cruz.

No.	Sex.	Locality.	Date.	Collector.
141	♂ jun.	Santa Barbara, Cal.	June 29	H. W. Henshaw.
269	♂ jun.	Mountains near Fort Tejon, Cal.	Aug. 2	Do.
270	♀ jun.	do	Aug. 2	Do.
271	♀ ad.	do	Aug. 2	Do.
487	♀ ad.	Mount Whitney, Cal.	Sept. 19	Do.

69. *Spizella breweri*, Cass.—Brewer's Sparrow.

Of the distinctness of this species from the *S. pallida* I am well assured, believing that the differences seen in the plumage, which are perfectly appreciable and always constant, the different character of songs and habits, and the totally different habitats of the two are points of distinction too great to be reconciled on the assumption of a mere varietal difference. No intergradation between the two has ever been attempted to be proven, their sameness specifically having apparently been taken for granted on the strength of the superficial resemblance of the two birds.

The mountainous country adjoining Fort Tejon was the only locality where this sparrow was found by our parties. It was here rather numerous in August, and I am inclined to believe that those seen here were summer residents. They perhaps winter in the extreme southern portion of the State.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
413	♂ ad.	Mountains near Fort Tejon, Cal.	Aug. 19	H. W. Henshaw.	2.44	2.73	0.33	0.67
476	♀	do	Aug. 14	do	2.40	.....	0.35	0.68
772	Jun.	do	Aug. 14	do	2.43	2.63	0.34	0.67

70. *Melospiza melodia*, (Wils.), var. *heermannii*, Bd.—Heerman's Song Sparrow

This Song Sparrow is found all over the southern half of California, and like its allies is, wherever found, an abundant species.

They like best the vicinity of water, and will always be found in the thickets of the small streams, preferring, however, not to follow these upward as they course down from the high mountains, but keep pretty exclusively in the low altitudes. Precisely like their relative in the East, they are always to be seen in the cultivated fields of the farmer, and build even in the hedgerows that surround the houses in the outskirts of the cities. In short, the bird is almost an exact reflection of the Eastern Song Sparrow. Their songs, however, while in general style similar to that bird, are very readily distinguished. Their tones are deeper, the songs longer, and of a much more varied character than the monotonous ditties of the eastern *Melospiza*.

They were quite numerous about San Francisco in November, and I presume they are permanent residents of the same locality throughout the year.

On the borders of Kern Lake, these Sparrows were found in the swamps of Tule Rushes, their only companions being the Rails and Marsh Wrens.

This was the only *Melospiza* seen by us in the south of the State, and is *par excellence* the Californian Song Sparrow.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
12	♂ ad.	Santa Cruz Island, Cal.....	June 10	H. W. Henshaw	2.45	2.62	0.47	0.87
13	♀ ad.	.....do.....	June 10	.....do.....	2.48	2.72	0.46	0.85
14	♂ ad.	.....do.....	June 10	.....do.....	2.37	2.52	0.48	0.83
68	♂ ad.	Santa Barbara, Cal.....	June 26	.....do.....	2.53	2.70	0.48	0.90
423	♂	Walker's Basin, Cal.....	Aug. 27	.....do.....	2.43	2.67	0.47	0.84
693	♂ ad.	.....do.....	Nov. 10	.....do.....	2.65	2.97	0.47	0.92
711	♂	.....do.....	Nov. 11	.....do.....	2.56	2.77	0.43	0.85
712	♂	.....do.....	Nov. 11	.....do.....	2.53	2.67	0.43	0.80
59	♀ jun.	Santa Barbara, Cal.....	June 25	.....do.....	.....	.....	.....	.....
59	♀ jun.	.....do.....	June 25	.....do.....	.....	.....	.....	.....
60	♀ jun.	.....do.....	June 25	.....do.....	.....	.....	.....	.....
61	♂ jun.	.....do.....	June 25	.....do.....	.....	.....	.....	.....
69	♀ jun.	.....do.....	June 26	.....do.....	.....	.....	.....	.....
77	♀ jun.	.....do.....	June 26	.....do.....	.....	.....	.....	.....
107	♂ jun.	.....do.....	June 27	.....do.....	.....	.....	.....	.....
145	♂ jun.	.....do.....	June 29	.....do.....	.....	.....	.....	.....
155	♂ jun.	.....do.....	June 29	.....do.....	.....	.....	.....	.....
357	♂ jun.	Kern Lake, Cal.....	Aug. 15	.....do.....	.....	.....	.....	.....
358	♂ jun.	.....do.....	Aug. 15	.....do.....	.....	.....	.....	.....
359	♀ jun.	.....do.....	Aug. 15	.....do.....	.....	.....	.....	.....
359 A	♀ jun.	.....do.....	Aug. 15	.....do.....	.....	.....	.....	.....
361	♂ jun.	.....do.....	Aug. 15	.....do.....	.....	.....	.....	.....
362	♀ jun.	.....do.....	Aug. 15	.....do.....	.....	.....	.....	.....
365	♂ jun.	.....do.....	Aug. 15	.....do.....	.....	.....	.....	.....

71. *Peucaea ruficeps*, (Cass.).—Red-capped Finch.

I notice this species here merely to call attention to the negative evidence afforded by its entire absence from our collections of the past season. The original specimen came from California, and the species has since been obtained by one or two collectors only, principally by Heerman, who found it abundant near the Calaveras River. Dr. Cooper refers to the species as inhabiting the Catalina Island, where he saw a few. Though I searched carefully for this bird in localities exactly similar to those which were always inhabited by the closely-allied variety (var. *boucardi*) in Arizona, I did not succeed in finding a single individual.

It is certainly not a widely-distributed species, and is probably quite rare. I have recently been informed that Mr. Allen, of Marin County, just north of San Francisco, has found this bird breeding in his locality.

72. *Passerella townsendi*, (Aud.).—Townsend's Sparrow.

Early in October the mountains in the vicinity of Mount Whitney began to be thronged with these birds, strangers from the far north, and now the chaparral and thickets on the steep mountain-sides, as well as the bushy ravines, were crowded by their numbers. From their abundance as far south as Caliente, I should suppose they spread over quite the entire southern part of the State. Lower than an elevation of 5,000 feet I did not find them. In spring they retire to more northern parts to breed, none being known to remain in the State.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.	Depth of bill.
526	♀	Mount Whitney, Cal.....	Oct. 7	H. W. Henshaw	3.12	3.05	0.48	0.97	0.38
527	Kern River, Cal.....	Oct. 7	.....do.....	3.17	3.27	0.50	0.90	0.34
534	♂	Mount Whitney, Cal.....	Oct. 9	.....do.....	3.33	3.22	0.50	0.93	0.36
541	♂	.....do.....	Oct. 10	.....do.....	3.23	3.12	0.50	0.97	0.36
562	♂	.....do.....	Oct. 11	.....do.....	3.19	3.10	0.48	0.93	0.36
644	♀	Walker's Basin, Cal.....	Nov. 5	.....do.....	3.12	2.95	0.48	0.98	0.37
645	♂	.....do.....	Nov. 5	.....do.....	3.33	3.27	0.50	0.95	0.36
646	♂	.....do.....	Nov. 5	.....do.....	3.28	3.30	0.52	0.95	0.37
665	♀	.....do.....	Nov. 9	.....do.....	3.08	2.98	0.46	0.88	0.34
666	♂	.....do.....	Nov. 9	.....do.....	3.25	3.30	0.50	0.93	0.38
690	♂	.....do.....	Nov. 10	.....do.....	3.10	3.15	0.48	0.93	0.37
691	♂	.....do.....	Nov. 10	.....do.....	3.15	3.16	0.45	0.92	0.33
707	♂	.....do.....	Nov. 11	.....do.....	3.28	3.26	0.51	0.90	0.36
708	♀	.....do.....	Nov. 11	.....do.....	3.30	3.24	0.48	0.93	0.34
709	♂	.....do.....	Nov. 11	.....do.....	3.38	3.29	0.51	1.02	0.39
667	♂	.....do.....	Nov. 9	.....do.....	3.18	3.12	0.48	0.97	0.35

73. *Passerella schistacea*, Baird, var. *megarynchus*, Baird.—Thick-billed Sparrow.

Passerella schistacea, Baird, B. N. A., 1858, 490 (only in part) (Fort Tejon).

Passerella megarynchus, Coop., B. Cal., i, 1870, 221 (Fort Tejon and northward).

Passerella townsendi var. *schistacea*, Coues, Key N. A. B., 1872, 352 (includes this form).

Passerella townsendi var. *megarynchus*, B., B., & R., N. A. B., ii, 1874, 57, pl. 25, f. 10.

¶ Of the four species or varieties of *Passerella*, the present bird is the most remarkable of all. In coloration it approaches, most closely to the form of the northern middle region, *P. schistacea*, from which indeed it differs but little, if color alone be taken as a test. It has the same slate-gray, perhaps slightly darker, as the prevailing tint, contrasted on the wings and upper coverts with brownish rufous. It has associated with an unusual development of the hind claw, an increased size of bill, paralleled perhaps in no other case. This is so thick as to appear actually deformed. In the large series of the preceding bird collected there is no approach to this form in the size of these parts, while the type of coloration peculiar to either is always perfectly tangible and well preserved. Besides being actually larger, the relative proportions of wing and tail are very different. In the present bird, as in the *schistacea*, the tail is very much longer than the wing. In *townsendi* the tail is usually the shorter, sometimes, however, equaling the wing. I have, therefore, thought best to consider *P. schistacea* as distinct from either *townsendi* or *iliacus*, assigning to it as a local variety *megarynchus*, which agrees with it in color and proportions. The relationship of the other two is probably similarly intimate.

The Thick-billed Sparrow appears to be quite confined to California, where it is an exclusive inhabitant of the mountains, chiefly in the middle and southern parts.

Mr. Ridgway found it abundant at Carson City, on the eastern slope of the Sierras, which is the northernmost locality recorded. In the mountains about Fort Tejon it was numerous enough in the month of August, but from its habits it was difficult to become very familiar with it, or even to procure specimens. Besides being of a naturally timid disposition it was only found in the chaparral, which was here composed chiefly of oak scrub; I did not find them lower down than about 5,000 feet.

When found feeding upon the ground on the outskirts of the thickets, they threw themselves with a peculiar loud sharp chirp into the undergrowth, and usually resisted all attempts to dislodge them by keeping in the thickest parts low down among the roots, and only flying, when absolutely compelled, to the next hiding-place.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.	Depth of bill.
371	♂ ad.	Mountains near Tejon, Cal.	Aug. 17	H. W. Henshaw.	3.42	3.96	0.63	0.98	0.52
404	♂ ad.	...do.....	Aug. 19	....do.....	3.35	3.83	0.64	0.98	0.58
405	♀ jun.	...do.....	Aug. 19	....do.....	.....	.....	.....	.....	.....
290	♂ jun.	...do.....	Aug. 3	....do.....	.....	.....	.....	.....	.....

74. *Guiraca melanocephalus*, (Swains.).—Black-headed Grosbeak.

This species, common throughout the middle region, is no less so on the Pacific slope. It occurs in all portions of California. During the summer it is rather partial to mountainous retreats, where it is found as often in the pine region as elsewhere; but it also graces the lower regions, and is found in the low valleys coming often about the houses.

Its song is the most interesting part of its history, and in its melody this species is exceeded by very few others.

No.	Sex.	Locality.	Date.	Collector.
96	♂ ad.	Santa Barbara, Cal.....	June 27	H. W. Henshaw.
25	♂ jun.	Los Angeles, Cal.....	June 29	Do.
133	♂ ad.	Santa Barbara, Cal.....	June 17	Do.

75. *Guiraca cærulea*, (Linn.).—Blue Grosbeak.

Though quite southern in its distribution, this Grosbeak appears to reach much farther north on the Pacific coast than in the interior, and Dr. Newberry has reported it from the extreme northern part of the State. We met with it at several places in Southern California, where it is pretty well diffused. It is never, I believe, found in the mountains, but inhabits the warm, sheltered valleys.

No.	Sex.	Locality.	Date.	Collector.
28	♀ ad.	Los Angeles, Cal.	June 17	H. W. Henshaw.
309	♀ jun.	Fort Tejon, Cal.	Aug. 7	Do.
310	♀ jun.	do	Aug. 7	Do.
332	♀ jun.	do	Aug. 9	Do.
333	♀ jun.	do	Aug. 9	Do.
425	♂ jun.	Walker's Basin.	Aug. 27	Do.

76. *Cyanospiza amana*, (Say).—Lazuli Finch.

This Finch, so much like the Indigo-bird in voice and habits, entirely replaces that species in the far west. Its organization seems to unfit it for a residence in high latitudes, and it also shuns the bracing air of the mountains, not occurring, according to Mr. Trippé, higher than 8,000 feet, an altitude at which I have never seen it. It is found in great abundance in the sheltered valleys, living for the most part along the streams, but at any rate the locality chosen must be more or less grown up to brush and bushes, among which it places its nest and spends the greater part of the time.

77. *Pipilo maculatus*, (Swains.), var. *megalonyx*, Bd.—Long-spurred Towhee.

This *Pipilo* is spread in great numbers over the southern half of California, ranging from the shrubbery of the lowlands well up on the mountains. On Santa Cruz Island it was one of the most numerous represented species; indeed, the surface of this island, broken and cut up in every direction by ridges and corresponding ravines, and everywhere covered with chaparral, forms just the abode suited to the habits of this bird. Accordingly, I think I never saw in a limited area such numbers of these birds, their mewing calls sounding in all directions. They are probably resident in Southern California, where, too, their numbers in fall are still further swelled by additions from more inclement regions farther north.

No.	Sex.	Locality.	Date.	Collector.
256	♂ jun.	Fort Tejon, Cal.	July 27	H. W. Henshaw.
267	♀ ad.	Tejon Mountains, Cal.	Aug. —	Do.
284	♂	do	Aug. 17	Do.
370	♂ ad.	do	Aug. 17	Do.
375	♂	do	Aug. 17	Do.
397	♂ jun.	do	Aug. 18	Do.
398	♂ jun.	do	Aug. 19	Do.
406	♂	do	—	Do.
647	♀	Walker's Basin, Cal.	Nov. 5	Do.
692	♀	do	Nov. 10	Do.
743	♂ jun.	Tejon Mountains, Cal.	Aug. 2	Do.
744	Jun.	do	Aug. —	Do.

78. *Pipilo fuscus*, Swains., var. *crissalis*, Ridgw.—Brown Finch.

This Finch was found by our parties in great abundance from San Francisco southward. The appellation Cañon Finch is not a very happy one, since it would suggest a preference for the rocky cañons, an inference by no means borne out by the habits of the bird. It is indeed an inhabitant of the mountains, being there, however, partial to the open thickets on the slopes, rather than to the recesses of the ravines. Moreover, it is found in much greater numbers in the level country and low valleys. In essential particulars it is a true *Pipilo*, having many of the habits common to the birds of this family, but especially resembles the var. *mesoleucus* from the southern interior region, its mode of life being indeed almost identical with that of this bird, except in so far as it has been modified to suit the somewhat different nature of the region it inhabits. It is never found far from cover, though venturing into the open oftener and to a greater distance than is the case with the shyer, more retiring, black *Pipilos*. Its whole nature seems to be more reliant, and in some places I have seen them venturing to the very door of the houses, and hopping with the utmost freedom about the yards, picking up crumbs, in company, perhaps, with their smaller friends, the Snow-birds. Their flight is better sustained and less "jerky" than most of the family, and is not so very unlike that of the Sickle-billed Thrush but that, when taken in connection with its large size, colors, and its long tail, it may often mislead one as it goes flirting through the foliage. When one comes upon them suddenly they throw themselves into the nearest clump with all haste, but should a convenient tree be at hand they will quickly be seen among the branches, where mounting to some convenient perch they sit and watch the cause of all the trouble, the various individuals meanwhile responding

to each others' calls by constant sharp chirps. For birds of this group they are more than usually gregarious. Through the summer each family maintains a close connection. In fall, their wanderings begin, and then they come together in large companies, the numbers being still further augmented by the addition of other species, as the Snow-kids and *Zorotrichias*, the whole forming a merry and united flock. Two broods are reared in a season. At Santa Barbara in June the young were very numerous, while I took the young still in nesting-plumage as late as August 10. I found the species in November about San Francisco, and they doubtless winter here.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
84	♂ jun.	Santa Barbara, Cal.	June 26	H. W. Henshaw				
85	♂ jun.	do	June 26	do				
86	♀ jun.	do	June 26	do				
128	♂ jun.	do	June 28	do				
351	♂ jun.	do	Aug. 10	do				
47	♂ ad.	do	June 25	do	3.74	4.37	0.60	1.08
422	♂	Walker's Basin, Cal.	Aug. 27	do	3.84	4.68	0.63	1.08
570	♂	Near Kernville, Cal.	Oct. 16	do	4.05	4.95	0.67	1.17
571	♀	do	Oct. 16	do	3.55	4.55	0.58	1.04
572	♀	do	Oct. 16	do	3.90	4.82	0.63	1.12
634	♂	do	Oct. 28	do	3.97	4.83	0.55	1.10
648	♀	Walker's Basin, Cal.	Nov. 5	do	3.67	4.57	0.58	1.07
649	♂	do	Nov. 5	do	3.68	4.67	0.58	1.08
710	♀	do	Nov. 11	do	3.78	4.52	0.59	1.05

79. *Pipilo chlorurus*, (Towns.).—Green-tailed Finch.

The present bird appears to be by no means as common in Southern California as throughout the interior country. It is pre-eminently a mountain-loving species, and in California I did not find it lower than 5,000 feet. At this elevation it was breeding in the mountains near Fort Tejon; the young, perhaps of a second brood, being taken August 1. It inhabits the tangled brakes and thickets nearly always close to the streams.

No.	Sex.	Locality.	Date.	Collector.
771	♂ jun.	Tejon Mountains, Cal.	Aug. 1	H. W. Henshaw.
408	♂	do	Aug. 19	Do.
409	♂ jun.	do	Aug. 19	Do.
444	♀	Near Mount Whitney, Cal.	Sept. 1	Do.

ALAUDIDÆ.—LARKS.

80. *Eremophila alpestris*, (Forst.), var. *chrysolaema*, Wagl.—Southern Horned Larks.

The small bright-colored race of the Horned Lark is a common summer resident along the coast of Southern California, and is found, too, at this season, according to Dr. Cooper, as far north as Puget Sound. In certain parts of the island of Santa Cruz, it was very numerous in June, as well, too, as along the adjoining shore of the mainland at Santa Barbara. The immense flocks of these birds that gather together in the fall are well known, but I was surprised to find to what extent this sociable feeling was carried during the breeding-season. Both on the mainland and on the island they were seen all through June in scattered flocks of both sexes, though nearly all, perhaps all, were at this time nesting. Both sexes incubate, and it appeared to be the habit of the birds when off duty to repair together in small flocks, and thus to wander in search of food. At this season they do not resort much to the sandy beaches, but keep on the upland, where among the herbage they find more easily, and in greater abundance, the insects and seeds which they are fond of. Their time of breeding must be quite irregular, as I found a fully-fledged young one June 1, though after this I took two nests, with fresh eggs, and the greater number, I am persuaded, still had eggs.

The nests were but rude attempts, being nothing more than a small pile of dried grasses, sufficiently hollowed to admit the reception of the eggs. One is deserving of notice as being placed within the cavity of an "ubalone" shell, one of a large heap, lying half overgrown with herbage. The whole cavity of the shell was filled by the material, and the eggs looked prettily enough as they lay contrasted with the shiny, pearly shells clustered about them. The eggs have a grayish-white background, spotted quite uniformly with fleckings of reddish brown. In one set of these, the background is almost obscured by the markings, which are aggregated together in blotches.

Two sets measured 0.86×1.81 — 0.85×0.63 — 0.88×0.63 ; 0.80×0.63 — 0.80×0.63 — 0.77×0.62 .

ICTERIDÆ.—ORIOLES.

81. *Agelæus phœniceus*, (Linn.), var. *gubernator*, (Wagl.).—Red-shouldered Blackbird.

Psarocolius gubernator, Wagl., Isis, 1832, 281.

Agelaius gubernator, Woodh., Sitgr. Exp., 1853, 89 (California).—Newb., P. R. R. Rep., vi, 1857, 86 (California).—Bd., B. N. A., 1858, 529.—Coop., B. Cal., i, 1870, 263.—Bendire, Proc. Bost. Soc. Nat. Hist., vol. xviii, 1815, 158.

Agelaius phœniceus var. *gubernator*, Coues, Key N. A. B., 1872, 156.—Bd., B., & R., N. A. B., ii, 1874, 163.

Though in perfectly adult plumage easily distinguishable from *phœniceus*, this bird is very closely allied to that species, but may perhaps properly be set apart from it as its western varietal form. It occurs throughout California, being, however, according to Dr. Cooper, chiefly a bird of the warm interior. I saw these birds in but few instances, and had no opportunity to observe their habits, which, however, according to other observers, are quite identical with those of the Eastern Red-wing.

So far as I am aware, no specimens of *A. phœniceus* of unquestioned identity have ever been taken in California, and I am led to believe that this bird does not occur there at all. The immature stages of *A. gubernator* are so much like the corresponding conditions of *phœniceus* that they may readily be mistaken, the one for the other, and in this way *A. phœniceus* has erroneously been ascribed to California.

No.	Sex.	Locality.	Date.	Collector.
31	♂ ad.	Los Angeles, Cal.....	June 18	H. W. Henshaw.
366	♀ ad.	Fort Tejon, Cal	Aug. 16	....do

82. *Agelæus tricolor*, Nutt.

Icterus tricolor, Nutt. Man., i, 2d ed., 1840, 186.

Agelæus tricolor, Newb., P. R. R. Rep., vi, 1857, 86.—Bd., B. N. A., 1858, 530.—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 192 (Fort Tejon, Cal.).—Coop., B. Cal., i, 1870, 265.—Bd., B., & R., N. A. B., ii, 1874, 165.

Agelæus phœniceus var. *tricolor*, Coues, Key N. A. B., 1872, 156.

The isolation of this form from its allies seems to be warrantable in view of the tangible differences that distinguish them in all stages, especially when taken in connection with the different habits and notes which most observers have remarked.

The species is quite strictly confined to California, possibly reaching on the north into Southern Oregon. In the southern portion of the State it is resident both on the sea-coast and in the interior. I found the species breeding in but one locality, in Santa Clara Valley, June 21. Noticing large numbers of Blackbirds flying across the road and into an adjoining pasture, I followed their flight till I found myself before a patch of nettles and briars that must have covered three or four acres. The place was not at all swampy, but was a dry pasture, differing in this respect entirely from the breeding-places selected by the Red-wings in the East. I noticed that each bird as it darted down into the clump bore in its bill a large object, which I subsequently found to be grasshoppers. The cause of their journeys was then explained. They had found some spot where these insects were very numerous, and back and forth they poured all day long, bringing in their bills all they could carry for their hungry young. The nettles grew so dense and high, some attaining to 12 feet, that I found it almost impossible to force my way into their midst, nor did I succeed in penetrating beyond a few yards. I speak within bounds when I say that two hundred pairs had here congregated to rear their young, and the odor arising from some portions was almost as strong as from the Cormorant rookeries. The nests were there by hundreds, nearly every bush holding several. They were, however, mostly old, showing that the place had served for a breeding-resort for probably many years. A few of the nests were this season's and contained young, none that I saw having eggs, though could I have extended my search some would doubtless have been found. The nests were rather slight, flimsy structures, but in general resembled those made by the Red-wing of the East, and were fastened on the bushes in the same way. My presence among them created a great disturbance, and the trees were soon covered with the parent birds, one and all resenting this intrusion on their old-time possessions in no gentle tones. A few days later I came across an immense flock of young birds in the streaked nesting-plumage. Able to take care of themselves, they had gathered thus together, and fairly covered several small trees by the roadside. In all the number there was not a single adult bird. Later still, July 6, a similar flock was found at Santa Barbara, the young having parted from the old birds and made an independent party. Possibly this early separation is due to the fact that the parents, having seen their charges fairly fledged and able to shift for themselves, shook them off and busied themselves with preparations for a second brood.

Heermann notes another very similar breeding-ground in the north of California;

so that it may be the regular habit of the species to thus gather together into rookeries. In fall, the white bordering the Red-wing patch changes to pale buff, being then precisely as seen in southern examples of *A. phœniceus*. The red, however, is of a totally different hue, being many shades darker. The black is of a brilliant metallic luster, very much as in the *Scolecophagus cyanocephalus*, never dull, as in *phœniceus*. The female and young are readily distinguishable from that species.

The Yellow-headed Blackbird is, according to Dr. Cooper, a common resident of the warm valleys of the interior of the State. The species was, however, not met with by us, owing to the fact that scarcely a locality was visited which would meet the necessities of their mode of life.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
33	♂ ad.	Santa Clara Valley, Cal	June 22	H. W. Henshaw.	4.83	3.72	0.92	1.19
34	♂ ad.	.....do	June 22	.....do	4.70	3.66	0.92	1.23
35	♂ ad.	.....do	June 22	.....do	4.20	3.16	0.75	1.03
37	♂ ad.	.....do	June 22	.....do	4.93	3.79	0.92	1.17
363	♂ ad.	.....do	Aug. 16	.....do	4.58	3.76	0.86	1.17
364	♂ ad.	.....do	Aug. 16	.....do	4.80	3.77	0.88	1.22
626	♂ ad.	.....do	Oct. 25	.....do	4.79	3.74	0.90	1.13
745	♂ jun.	.....do	Aug. —	.....do	4.58	3.62	0.88	1.23
189	♂ jun.	Santa Barbara, Cal	July 6	.....do .....	.....	.....	.....	.....
190	♀ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
191	♂ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
192	♂ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
193	♂ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
194	♂ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
195	♀ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
196	♀ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
197	♀ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
198	♀ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
199	♂ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
200	♂ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....
201	♀ jun.	.....do	July 6	.....do .....	.....	.....	.....	.....

83. *Sturnella magna*, (Linn.), var. *neglecta*, Aud.—Western Meadow-lark.

The distribution of the Lark in California agrees with its general dispersion over the West. It is found in the fertile valleys and on the plains, even when the latter are dry. In summer it is more restricted to the meadowy lands where there is herbage sufficient to serve as a cover for its nest. I was much surprised to see a pair upon the island of Santa Cruz, this being about as unpromising a locality for birds of their habits as could well be imagined. The single couple had taken up their abode in a small garden, the green things in which were nourished by a small rivulet of water, and their nest had probably been made in a patch of grain, which they frequented much of the time.

No.	Sex.	Locality.	Date.	Collector.
21	♂ ad.	Santa Cruz Island, Cal	June 10	H. W. Henshaw...
172	♂ ad.	Santa Barbara, Cal	July 1	.....do
173	♀ jun.	.....do	July 1	.....do
420	♂	Walker's Basin, Cal	Aug. 27	.....do
502	♂	Near Mount Whitney, Cal	Sept. 26	.....do
582	♂ ad.	Near Kernville, Cal	Oct. 21	.....do
583	♂ ad.	.....do	Oct. 20	.....do
628	♂ ad.	.....do	Oct. 27	.....do
629	♀	.....do	Oct. 25	.....do

84. *Icterus bullocki*, (Swains.).—Bullock's Oriole.

This Oriole occupies in the West the same place so conspicuously filled by the well-known Baltimore in the East. It comes freely into the precincts of village and city, suspending its nest from the swaying limbs of the shadetrees. It was very common about Los Angeles in June, and probably had young at that time.

No.	Sex.	Locality.	Date.	Collector.
260	♀ jun.	Fort Tejon, Cal	Aug. 27	H. W. Henshaw...

85. *Scolecophagus cyanocephalus*, (Wagl.).—Brewer's Blackbird.

A very abundant species throughout the State and a constant resident. In summer they prefer the neighborhood of the streams to the marshes proper, though found in the latter in company with the Tri-colored Blackbirds, there existing between the two species an unusually close intimacy. Many of these birds were breeding in company with a large colony of the *A. tricolor* before mentioned.

No.	Sex.	Locality.	Date.	Collector.
320	♀	Fort Tejon, Cal.	Aug. 8	H. W. Henshaw...
627	♀ ad.	Near Kernville, Cal.	Oct. 27	.....do

CORVIDÆ.—CROWS.

86. *Corvus corax*, Linn., var. *carnivorus*, Baxtr.—American Raven.

The Raven is an abundant resident in California, and is found without much reference to locality. Its omnivorous tastes and its great usefulness as a scavenger are well known. I saw Ravens occasionally on Santa Cruz Island, and, on inquiry, learned that they were no favorites with the sheep-raisers here, on account of their habit of occasionally destroying the lambs. Captain Forney informed me that he had been an eye-witness to the destruction of a lamb by one of these birds, the attack being made first upon the eyes, which were torn out. This habit of the Raven, he states, was well known to the shepherds.

87. *Corvus caurinus*, (Bd.).—Western Fish-Crow.

Corvus caurinus, Bd., B. N. A., 1858, 569.—Coop. & Suckl., P. R. R. Rep., vol. xii, pt. ii, 1860, 211.—Dall & Bann., Tr. Chic. Acad., i, 1869, 286.—Coop., B. Cal., i, 1870, 285.—B., B., & R., N. A. B., ii, 1874, 248.—Bendire, Proc. Bost. Soc. Nat. Hist., vol. xviii, 1876, 159 (Camp Harney, Oreg.).
Corvus americanus var. *caurinus*, Coues, Key N. A. B., 1872, 163.
Corvus ossifragus, Newb., P. R. R. Rep., vi, 1857, 83.

In the uncertainty respecting the relations of this bird, I am disposed to keep it apart from the *Corvus americanus*, with which it has been associated as a variety by some writers, till its relationship be established on a firmer basis than at present. It appears to be mainly distinguishable from its smaller size and certain apparent differences of habits. I regret I can add so little to our knowledge of the subject. On the road from Los Angeles to Santa Barbara, these Crows were seen on several occasions, always in large flocks, and at a distance from the coast of from 5 to 15 miles. In fact, in Southern California, the species does not appear to be specially all maritime in its habits, if, indeed, it is so to more than a moderate extent. In its northern home, however, on Puget Sound and elsewhere, it is essentially a bird of the coast, living there upon shell-fish and the refuse cast up by the waves.

In my own brief experience in California I saw nothing in their manner incompatible with the normal habits of the Common Crow. In this respect, however, it is not different from the Fish-Crow (*ossifragus*) of the Gulf States, which, save in its maritime proclivities, presents little to distinguish its habits from those of the Common Crow; yet the Fish Crow in Florida is found very often miles away from the coast, while not infrequently I have there seen the *Corvus americanus* associated with it in its excursions along shore. The truth seems to be that with birds possessing the omnivorous tastes of the Crows, it is the quantity and ease with which food is obtained that directs their choice more than anything else. Hence, about Puget Sound and this region generally, as in the warm waters of Florida, where mollusks and crustaceans exist in greatest abundance, the habit of resorting to the shores for the chief part of their living has become a fixed one, while elsewhere they find it easier to obtain their food from the interior.

The notes of *caurinus*, as I heard them in California, were different from those of the *Corvus americanus*, and I should say they resemble very closely those of the true Fish Crow. Certainly, no one hearing their hoarse calls could for a moment mistake them for the Common Crow. Like the Fish Crow, the *C. caurinus* keeps very much in flocks, and it is said to even build in communities.

No.	Sex.	Locality.	Date.	Collector.
186	♂ jun.	Santa Barbara, Cal.	July 5	H. W. Henshaw.

88. *Picicorvus columbianus*, (Wils.).—Clarke's Nutcracker.

During the month of September, this curious bird was met with in great numbers, and, according to its usual habit, in large flocks in the high sierras, where it kept entirely among the yellow pines. These were hanging full of seeds, and to extract these from the cones was their chief, indeed their only, occupation. Their loud, shrill cries went echoing through the deep woods, as they flew about in noisy bands intent only on cramming their stomachs. The seeds are obtained with much ease and dexterity, as the birds hang back downward, clinging to the ends of the branches or to the cones themselves. A seed fairly extracted, it is taken to a horizontal limb of some size, and there the covering shelled off by a few sharp blows with their heavy bills, when it is quickly disposed of.

The *Gymnokitta cyanocephala* was not noted in any part of the region traversed by the Survey. Though recorded from California, it does not appear to be a common bird on the Pacific slope, and may perhaps be wanting in the more southern parts of the State.

No.	Sex.	Locality.	Date.	Collector.
734	♂	Tejon Mountains, Cal.....	Aug. 2	H. W. Henshaw.

89. *Pica melanoleuca*, (Linn.), var. *nuttalli*.—Yellow-billed Magpie.

Pica nuttalli, Aud., Orn. Biog., iv, 1838, 450, pl. 362.—Woodh., Sitgr., Exp. Zuñi & Col. Riv., 1854, 77.—Newb., P. R. R. Rep., vi, 1857, 84.—Bd., B. N. A., 1858, 578.—Heerm., P. R. R. Rep., x, 1859, pt. vi, 54.—Coop., B. Cal., i, 1870, 295.

Pica melanoleuca var. *nuttalli*, Coues, Key N. A. B., 1872, 164.

Pica caudata var. *nuttalli*, B., B., & R., N. A. B., ii, 1874, 270.

This is the form prevailing in all the region west of the Sierras. They inhabit the valleys, being rather partial to a rough broken surface, interspersed with groves of oaks. I saw many of their nests placed in these. Like their relative from the interior, anything edible suits their appetite, though, like them, flesh is preferred to almost everything else. They are thus, with the Ravens, very useful as scavengers, and, having found the body of a dead animal, never leave the vicinity till the bones and skin alone remain. In the Sierras proper we did not meet with these birds, but in various parts near the sea-coast they were very numerous.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
32	♂ jun.	Santa Clara Valley, Cal ...	June 22	H. W. Henshaw	7.50	9.50	1.27	1.38
36	♂ jun.	..... do	June 22	....do	7.35	8.15	1.35	1.82
134	♀ jun.	Santa Barbara, Cal	June 29	....do	7.15	8.65	1.21	1.79
182	♀ jun.	..... do	July 5	....do	7.30	9.50	1.32	1.85
183	♀ jun.	..... do	July 5	....do	7.15	8.30	1.16	1.76
184	♂ jun.	..... do	July 5	....do .....	.....	.....	.....	.....
185	♂ jun.	..... do	July 5	....do .....	.....	.....	.....	.....

90. *Cyanura stelleri*, (Gm.), var. *frontalis*, Ridgw.—Steller's Jay; Blue-fronted Jay.

Cyanocitta stelleri, Newb., P. R. R. Rep., vi, 1857, 85.—Bd., B. N. A., 1858, 581 (includes var. *frontalis*).—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 192.—Coop. & Suckl., P. R. R. Rep., vol. xii, pt. ii, 1860, 215.—Coop., B. Cal., i, 1870, 298 (includes var. *frontalis*).—Coues, Key N. A. B., 1872, 165 (var. *frontalis* also).—Nelson, Proc. Bost. Soc. Nat. Hist., vol. xvii, 360 (California).—Bendire, Proc. Boston Soc. Nat. Hist., vol. xviii, 1875, 160 (Camp Harney, Oregon; probably var. *frontalis*).

Cyanura stelleri var. *frontalis*, B., B., & R., N. A. B., ii, 1874, 279.

This Jay is a common inhabitant of the mountains throughout California, rarely being seen in summer below 5,000 feet, and extending from about that point to the very limit of the timber-line. During the breeding-season, they separate into pairs, and are then very silent and retiring. After the broods are out and well on the wing, they begin their roving, independent life, and their enforced silence gives way to their more usual frame of mind, when noisy outpourings herald their presence in every direction. The bird is a true resident of the pine-woods, and from the pines is had no small part of its subsistence.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
282	Jun.	Tejon Mountains, Cal	Aug. 3	H. W. Henshaw				
421	♂ jun.	Walker's Basin, Cal	Aug. 27	do				
469	♂ jun.	Near Mount Whitney, Cal	Sept. 12	do				
461	♀	..... do	Sept. 10	do	5.65	5.25	1.12	1.63
598	♀ ad.	..... do	Oct. 16	do	5.68	5.71	1.28	1.63
599	♀ jun.	..... do	Oct. 23	do	5.58	5.35	1.26	1.43
620	♂ ad.	..... do		do	5.75	5.62	1.33	1.65
621	♂ jun.	Near Kernville, Cal		do	8.62	5.30	1.36	1.63

91. *Cyanocitta floridana*, (Bartr.), var. *californica*, (Vigors).—Californian Ground Jay.

Garrulus californicus, Vigors, Zool Beechey's Voy., 1839, 21, pt. v.

Cyanocitta californica, Newb., P. R. R. Rep., vi, 1857, 85.—Bd., B. N. A., 1858, 584.—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 192; ibid., 1859, 305 (Cape St. Lucas).—Coop., B. Cal., i, 1870, 302.

Aphelocoma floridana var. *californica*, Coues, Key N. A. B., 1872, 166.—Nelson, Proc. Bost. Soc. Nat. Hist., xvii, 1875, 360 (California).

Cyanocitta floridana var. *californica*, B., B., & R., N. A. B., 1874, ii, 291.

So far as habits are concerned, this bird is simply the Florida Jay transferred from the scrub of that peninsula to the chaparral of California. Its vertical range is exactly complementary to that of the Steller's Jay. It is found from well down in the valleys to a height on the mountains of about 5,000 feet, farther up than which it begins to be rare, while here the other, a true Mountain Jay, begins to put in an appearance.

Its mode of life offers little that is distinctive. When disturbed, it clings to the thickets for protection, and if much alarmed makes off at its best speed under their cover. When slightly startled, its curiosity compels it to linger, and in the unfrequented parts of California, and especially upon the island of Santa Cruz, the report of a gun was not sufficient to excite its fears. In this unsophisticated nature, it is rather peculiar; both the Woodhouse's and Florida Jays possessing their full share of the wariness characteristic of the family.

No.	Sex.	Locality.	Date.	Collector.
19	♀ ad.	Santa Cruz Island, Cal	June 10	H. W. Henshaw.
20	♂ ad.	..... do	June 11	Do.
731	♀ ad.	..... do	June 2	Do.
331	♀ ad.	Fort Tejon, Cal	Aug. 9	Do.
429	♀ ad.	Walker's Basin, Cal	Aug. 28	Do.
656	♂	..... do	Nov. 5	Do.
657	♀	..... do	Nov. 11	Do.
664	♂	Near Kernville, Cal	Nov. 9	Do.
697	♂	..... do	Nov. 10	Do.
698	♂	..... do	Nov. 10	Do.
699	♀	..... do	Nov. 11	Do.
732	.....	do	Nov. 11	Do.
733	.....	do	Nov. 11	Do.

TYRANNIDÆ.—FLYCATCHERS.

92. *Tyrannus verticalis*, Say.—Arkansas Flycatcher.

This Flycatcher extends from Kansas, and even farther eastward (Iowa), across the central plains, and so on to the Pacific. South it is found well into Arizona, and north into British Columbia. Over much of this region it is abundant, and it is absent only from the high mountain-ranges. In the southern half of California, it is quite numerous, perhaps as much so as anywhere in its wide habitat. Its habits are the same everywhere. The *Tyrannus vociferans*, I find recorded in my note-book as occurring about Los Angeles in June, but I did not secure any specimens, nor was it seen elsewhere.

According to Dr. Cooper, it is quite common in Southern California, and winters about Los Angeles.

No.	Sex.	Locality.	Date.	Collector.
35	♂ ad.	Los Angeles, Cal	June 17	H. W. Henshaw.
88	♀ jun.	Santa Barbara, Cal	June 26	Do.
91	♂ jun.	..... do	June 26	Do.
149	♂ jun.	..... do	June 29	Do.
268	♂ jun.	Tejon Mountains, Cal	Aug. 2	Do.

93. *Myiarchus cinerascens*, Lawr.—Ash-throated Flycatcher.

Generally distributed over the southern portion of the State and common, avoiding the heavy timber and the mountains. Habits very similar to those of *crinitus*. The young were fully fledged by the middle of July.

No.	Sex.	Locality.	Date.	Collector.
81	♀ ad.	Santa Barbara, Cal.....	June 26	H. W. Henshaw.
246	♀ jun.	Ojai Creek, Cal.....	July 17	Do.
261	♂ jun.	Fort Tejon, Cal	July 26	Do.
262	♂ jun.	..... do	July 26	Do.
341	♀ jun.	..... do	Aug. 9	Do.
279	♀ jun.	..... do	Aug. 2	Do.

94. *Sayornis nigricans*, (Swains.).—Black Flycatcher.

This Flycatcher is quite numerous in summer in California, especially in the southern portion, where its habits and method of nidification recall those of the eastern Phœbe.

No.	Sex.	Locality.	Date.	Collector.
43	♂ ad.	Santa Barbara, Cal.....	June 24	H. W. Henshaw.
143	♀ ad.	..... do	June 29	Do.
263	♂ jun.	Fort Tejon, Cal	July 27	Do.

95. *Sayornis sayus*, (Bon.).—Say's Flycatcher.

The proclivity of this species for a rather northerly habitat is seen in California, where it is not found at all in summer in the southern portion, though possibly it occurs in the more northern parts. In the fall, it makes its appearance south of San Francisco late in September, and remains through the winter.

No.	Sex.	Locality.	Date.	Collector.
583	♀	Near Kernville, Cal.....	Oct. 20	

96. *Cantopus borealis*, (Swains.).—Olive-sided Flycatcher.

Coincident with its diffusion over North America generally, this Flycatcher is found on the Pacific coast, though in Southern California at least it appears to be not so numerous as in the middle region. It is pretty closely confined to the mountains.

No.	Sex.	Locality.	Date.	Collector.
753	♂ ad.	Mountains near Fort Tejon, Cal.....	Aug. 5	H. W. Henshaw.

97. *Contopus virens*, (Linn.), var. *richardsoni*, Swains.—Short-legged Pewee.

In California, as elsewhere throughout the far west, this Pewee is by far the most numerous of the Flycatchers. It is found in every piece of woodland, though in summer the greater number retire to the depths of the mountains.

No.	Sex.	Locality.	Date.	Collector.
144	♀ ad.	Santa Barbara, Cal.....	June 29	H. W. Henshaw.
321	♀ ad.	Fort Tejon, Cal	Aug. 7	Do.
354	♂ jun.	Tejon Mountains, Cal	Aug. 10	Do.

98. *Empidonax traili*, (Aud.), var. *pusillus*, Swains.—Little Flycatcher.

Dr. Cooper was certainly in error in considering the *E. traili* as identical with the form found in California. This is the same as that occurring in the middle region,

known as var. *pusillus*. Specimens from the two regions are indistinguishable. The habits of the bird in the two regions are quite identical. The bird is an abundant one in Southern California, and especially so in the swampy thickets about Los Angeles.

A nearly-completed nest of this bird, which I found June 17, was placed in a crotch of a swinging grape-vine, and its structure was unusually neat and firm for a Flycatcher. A curious departure from the usual method of nidification has just come to my notice. Mr. Allen, of ——, discovered the nest of this species, with eggs, built in the hollow of a tree. The parent was secured, and its identity thus firmly established.

No.	Sex.	Locality.	Date.	Collector.
27	♂ ad.	Los Angeles, Cal	June 17	H. W. Henshaw.
63	♂ ad.	Santa Barbara, Cal.....	June 25	Do.
79	♀ ad.	..... do	June 26	Do.
310	♂ jun.	Fort Tejon, Cal	Aug. —	Do.
384	♂ ad.	Tejon Mountains, Cal.	Aug. 17	Do.

99. *Empidonax flaviventris*, Bd., var. *difficilis*, Bd.—Western Yellow-bellied Flycatcher.

A not uncommon summer resident in Southern California. They spend the summer from sea-level up to 7,000 feet, but are most numerous among the mountains.

No.	Sex.	Locality.	Date.	Collector.
78	♂ ad.	Santa Barbara, Cal	June 26	H. W. Henshaw.
154	♂ ad.	..... do	June 29	Do.
410	♂ ad.	Tejon Mountains, Cal	Aug. 19	Do.
415	♀ ad.	..... do	Aug. 19	Do.
424	♂ jun.	Near Kernville, Cal	Aug. 27	Do.

100. *Empidonax obscurus*, (Swains.).—Wright's Flycatcher.

I saw but a few of this species in the Sierras, near Mount Whitney, in September. One specimen obtained here was in such immature plumage that I think it had been reared in the neighborhood.

No.	Sex.	Locality.	Date.	Collector.
451	♀ jun.	Near Mount Whitney, Cal	Sept. 10	H. W. Henshaw.

101. *Empidonax hammondi*, (Xantus).—Hammond's Flycatcher.

I could find no evidence that this Flycatcher breeds in Southern California, though I am by no means positive that the deep mountains do not afford it a summer home. Dr. Cooper's account of its method of nidification refers with but little doubt to the var. *pusillus*.

After September, the species became a common one in the mountains. It remains till into October, but finally retires farther south.

No.	Sex.	Locality.	Date.	Collector.
450	♂	Near Mount Whitney, Cal	Sept. 10	H. W. Henshaw.
518	♂	..... do	Oct. 3	Do.
551	♀	..... do	Oct. 11	Do.

ALCEDINIDÆ.—KINGFISHER.

102. *Ceryle alcyon*, (Linn.).—Belted Kingfisher.

Present here in about the usual numbers. Every small stream which is stocked with fish is occupied by one or more of these birds.

CAPRIMULGIDÆ.—GOATSUCKERS.

103. *Chordeiles popetue*, (Vieill.), var. *henryi*, Cass.—Western Night-hawk.

This Hawk is extremely abundant throughout all of the middle region, but appears to be wanting in much of Southern California. We did not meet with the species at

all; and, with Dr. Cooper, I am inclined to believe that it is wanting through the Coast range. It is spoken of as quite numerous in the Sacramento Valley in summer by Dr. Newberry, and not unlikely occurs in the interior and western portions of the State at this season.

104. *Antrostomus nuttalli*, (Aud.).—Poorwill.

On the summits of the mountains near Fort Tejon the Poorwills were remarkably numerous, keeping hidden during the day among the dense chaparral, where they crouched so close that I several times almost trod on them ere they took to wing.

No.	Sex.	Locality.	Date.	Collector.
751	♂ jun.	Tejon Mountains, Cal	Aug. 2	H. W. Henshaw.
752	♂ jun.	.....do	Aug. 2	Do.

105. *Chætura vauxii*, Townsend.—Oregon Swift.

A Swift was present in the Tejon Mountains in August, which I believe was this species.

TROCHILIDÆ.—HUMMING-BIRDS.

106. *Stellula calliope*, (Gould).—Calliope Humming-bird.

This species was most unaccountably rare in the mountains of Southern California, and I saw but a single individual in the Tejon Mountains, August 17. Even this may have been a migrant, and the species may not occur at all in summer in Southern California. It is very abundant in the Cascade Mountains in the northwest, where it breeds.

107. *Trochilus alexandri*, Bourcier & Mulsant.—Black-chinned Humming-bird.

This Hummer was not found by our parties very common in any portion of California. They are probably most numerous in the early part of the season, when flowers are most abundant.

No.	Sex.	Locality.	Date.	Collector.
403	♂ pin.	Tejon Mountains, Cal	Aug. 19	H. W. Henshaw.

108. *Selasphorus rufus*, (Gmel.).—Rufous-backed Humming-bird.

This species is quite common in summer throughout California, and breeds apparently as commonly in the valleys as in the mountains. It occurs at this season all along the coast as far to the north at least as Sitka. A few probably remain during the winter, in the warm, sheltered valleys of the western part of the State, though the species, as a rule, retires farther south for winter-quarters. In comparing a series of these birds taken in California and to the northward with a full suite secured by the expedition in Arizona and New Mexico, I was struck with certain differences in coloration which appeared, and though these, after full consideration, appear of too slight and inconstant a nature to warrant the definition of a varietal form upon them, they are yet of sufficient interest as to be worthy of mention. Briefly, the differences resolve themselves into a somewhat deeper tone of coloration in individuals from the Pacific coast. The slight cinnamon of the interior type becomes, in some specimens, a deep rufous, and in all it is noticeably darker. In the male, the flame-colored gorget is tinged strongly with purplish. In them is seen also a tendency to retain the metallic-green color on the dorsal surface, which is common to the females and young, and which, in the interior, is always replaced in the adult males with clear light cinnamon.

In no small proportion of what appear to be adult males from the Pacific coast the metallic green extends from the head entirely over the back and even over the upper tail-coverts, leaving only the tail rufous. Some males, also adult, are found, which have the back of an unmixed rufous, while many occur which exhibit both phases of coloration in varying measure—green mixed with rufous, rufous mixed with green.

As these different conditions may be found in the same locality in California, the impossibility of drawing a varietal line is here seen.

No.	Sex.	Locality.	Date.	Collector.
65	♀ ad.	Santa Barbara, Cal.	June 25	H. W. Henshaw.
81	♂ jun.	do	June 26	Do.
132	♀	do	June 28	Do.
382	♀ ad.	Tejon Mountains, Cal.	Aug. 17	Do.
389	♀	do	Aug. 18	Do.
774	♂ jun.	do	Aug. —	Do.
775	♂ jun.	do	Aug. —	Do.

109. *Calyppe anna*, (Lesson).—Anna Humming-bird.

During the summer we saw none of this Hummer in the low valleys, but found it reasonably numerous in the mountains, where it is likely most of them retire to breed. Dr. Cooper, however, found them breeding about San Francisco as early as March. They appear to winter there, as I found them quite numerous in the gardens late in November.

The *Calyppe costoe*, according to Dr. Cooper, occurs as far north as San Francisco, where it is rare. None were detected by our parties. Its general distribution is southern, being very abundant in summer at Cape Saint Lucas.

No.	Sex.	Locality.	Date.	Collector.
259	♂ jun.	Fort Tejon, Cal.	July 26	H. W. Henshaw.
272	♂ ad.	do	Aug. 2	Do.
328	♀ ad.	do	Aug. 8	Do.
381	♀ ad.	Tejon Mountains, Cal.	Aug. 17	Do.
387	♂	do	Aug. 18	Do.
386	♀	do	Aug. 18	Do.
388	♀	do	Aug. 18	Do.
401	♂	do	Aug. 19	Do.
402	♀	do	Aug. 19	Do.
776	.....	California	.....	Do.
777	jun.	do	.....	Do.
778	jun.	do	.....	Do.

CUCULIDÆ—CUCKOOS.

110. *Geococcyx californianus*, (Lesson).—Chaparral Cock.

The Ground Cuckoo is an abundant resident through Southern California. It is found in all sorts of localities, though the hill-sides, covered with a more or less dense growth of bushes, and interspersed here and there with rocks, are as well suited to its habits as any. Its food consists of all sorts of insects, of lizards, and the smaller reptiles generally; in fact, of all kinds of animal life that its speed, aided by its powerful bill, enable it to overtake and kill. In many parts of the State, it appears to have become familiarized, to a certain extent, with man, and to regard him with very little fear.

When running at full speed, the long tail is lowered till its end almost touches the ground, when the bird seems fairly to glide over the earth, so easy are its movements. When hurrying, the tail is made of considerable use to enable it to turn quickly, being thrown with a jerk from side to side, according to the direction to be taken. Having gained the cover of the bushes, its safety seems assured, and it usually pauses in the first cover and stands with head erect and listening ears, the tail vibrating with nervous haste, ready to recommence its flight at a moment's warning.

No.	Sex.	Locality.	Date.	Collector.
238	♂ ad.	Santa Barbara, Cal.	July 8	H. W. Henshaw.
601	♀	Kernville, Cal.	Oct. 25	Do.

PICIDÆ.—WOODPECKERS.

111. *Picus villosus*, (Linn.), var. *harrisi*, Aud.—Harris's Woodpecker.

The Harris's woodpecker is a more or less common summer resident of the mountains throughout Southern California, finding its home chiefly among the pine-forests.

No.	Sex.	Locality.	Date.	Collector.
317	♂ jun.	Fort Tejon, Cal	Aug. 8	H. W. Henshaw.
552	♂ ad.	Near Mount Whitney, Cal	Oct. 11	Do.

112. *Picus pubescens*, (Linn.), var. *gairdneri*, Aud.—Gairdner's Woodpecker.

The disproportion existing in the number of this bird in the interior region, as compared with the preceding species, is not observable in California, at least to anything like the same extent. In Northern California, Cooper appears to have found it not uncommon, and a similar experience was had by us the past season in the region south of San Francisco. In distribution it is not so boreal as the Harris's Woodpecker, and coincident with this difference we do not find it among the high mountains in California, save occasionally, but with the Nuttall's it resorts to the low districts, and frequents, to a great extent, the deciduous timber, especially the oaks.

No.	Sex.	Locality.	Date.	Collector.
126	♂ jun.	Santa Barbara, Cal	July 28	H. W. Henshaw.
138	♀ ad.	.....do.....	June 29	Do.
204	♀ jun.	.....do.....	July 6	Do.
574	♀ jun.	Near Kernville, Cal	Oct. 16	Do.
689	♂ ad.	Walker's Basin, Cal	Nov. 10	Do.
736	♀	.....do.....		

113. *Picus nuttalli*, Gambel.—Nuttall's Woodpecker.

Picus nuttalli, Gambel, Pr. A. N. Sc., i, 1843, 259 (Los Angeles, Cal.).—Woodh., Sitgr. Exp. Zuñi & Col. River, 1854 (California).—Newb., P. R. R. Rep., vi, 1857, 89.—Bd., B. N. A., 1858, 93.—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 190.—Coop., B. Cal., i, 1870, 378.—Bd., B., and R., N. A. B., 11, 1874, 521.

Picus scolaris var. *nuttalli*, Coues, Key N. A. B., 1872, 193.—Nelson, Proc. Bost. Soc. Nat. Hist., vol. xvii, 1875, 362 (California).

From the *P. scolaris* of the southern interior region and Mexico this bird appears sufficiently distinct. Though in general the two resemble each other, the points of discrepancy are yet sufficiently tangible and are not found to intergrade. The relationship of the *P. var. lucasanus* of Cape Saint Lucas seems to be with *scolaris*, and is, I think, to be considered with that bird as distinct from *nuttalli*. Considerable differences exist, I think, in the habits of *scolaris* and *nuttalli*, though in birds like the Woodpeckers, where general family characteristics are to be seen in every species, it is not easy to emphasize these in such manner as to make them very apparent to others, though they may be evident enough in the field.

The notes, especially as I have heard them, differ totally in character. Those of *scolaris* are quite like the usual ones of the well-known *pubescens*. No such similarity can be traced in the *nuttalli*. The usual notes of this species consist of a series of loud, rattling notes, much prolonged, and can be compared with no other Woodpecker with which I am acquainted.

This Woodpecker is a bird particularly of the oak-groves, and ranges from the lower valleys up into the mountains to a height of at least 6,000 feet, where, near Fort Tejon, I found it fairly numerous among the pines; this being the only locality where I found it among the conifers. *P. scolaris*, on the other hand, inhabits the low, hot valleys of the interior, being most partial to the mesquite-thickets. It is never, I believe, at least in Arizona, found in the mountains nor among the pines, and rarely among the oaks, and though I have frequently seen it in places where it would easily have found the surroundings if so minded.

The Nuttall's Woodpecker is pretty strictly confined to California, barely reaching into Oregon on the north, and limited in range eastward by the western slope of the Sierras. It appears to be most numerous in the valleys of the Coast range, though I found it quite common at Fort Tejon, and in October secured specimens at Kernville.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
137	♀ ad.	Santa Barbara, Cal.	June 29	H. W. Henshaw	4.08	2.97	0.80	0.71
136	♂ ad.	do	June 29	do	4.07	3.05	0.86	0.75
744	♂ jun.	do	June 17	do	4.03	2.79	0.80	0.75
255	♂ ad.	Fort Tejon, Cal.	July 27	do	4.25	.....	0.88	0.82
318	♀ jun.	do	Aug. 8	do	4.13	2.92	0.78	0.73
349	♂ ad.	do	Aug. 10	do	4.08	3.27	0.88	0.73
350	♂ ad.	do	Aug. 10	do	4.22	3.20	0.86	0.73
394	♂ jun.	Tejon Mountains, Cal.	Aug. 17	do	.....	.....	.....	.....
395	♂ jun.	do	Aug. 17	do	.....	.....	.....	.....
396	♂ jun.	do	Aug. 17	do	.....	.....	.....	.....
573	♂ ad.	Near Kernville, Cal.	Oct. 16	do	4.18	2.98	0.82	0.74
589	♂ ad.	do	Oct. 23	do	4.10	3.05	0.80	0.73

114. *Picus albolarvatus*, Cassin.—White-headed Woodpecker.

Leuconerpes albolarvatus, Cassin, Pr. A. N. Sc., v, 1850, 106, California.

Picus albolarvatus, Bd., B. N. A., 1858, 96.—Coop. and Suckl., P. R. R. Rep., vol. xii, pt. ii, 1860, 160.—Coop., B. Cal., i, 1870, 382.—Coues, Key N. A. B., 1872, 192.—B., B., and R., N. A. B., ii, 1874, 521.—Nelson, Proc. Bost. Soc. Nat. Hist., vol. xvii, 362 (California).

This fine species was found by us tolerably numerous in the pine-woods of the mountains near Fort Tejon, and also in the Mount Whitney region, and I am inclined to think that it is a resident in the high mountains throughout Southern California. It appears to keep pretty much among the pines, and is thus a bird of the high altitudes.

In habits it shows no peculiarities from those of the *Pici* generally, and its notes are in no wise peculiar.

No.	Sex.	Locality.	Date.	Collector.
373	♀ jun.	Tejon Mountains, Cal.	Aug. 17	H. W. Henshaw.
545	♀ ad.	Mount Whitney, Cal.	Oct. 10	Do.
546	♀ jun.	do	Oct. 10	Do.
622	♀	do	Oct. 25	Do.
623	♂ ad.	do	Oct. 25	Do.
661	♂	Walker's Basin, Cal.	Nov. 9	Do.
662	♂	do	Nov. 9	Do.

115. *Sphyrapicus varius*, (Linn.), var. *ruber*.—Red-breasted Woodpecker.

Picus ruber, Gm., Syst. Nat., i, 1788, 429.—Heerm., P. R. R. Rep., x, 1859, pt. vi, 57.

Sphyrapicus ruber, Bd., B. N. A., 1858, 104.—Coop. and Suckl., P. R. R. Rep., vol. xii, pt. ii, 1860, 160.—Coues, Key N. A. B., 1872, 195.—Nelson Proc. Bost. Soc. Nat. Hist., vol. xvii, 362.

Sphyrapicus ruber, Coop., B. Cal., i, 1870, 392.—Xantus, Proc. Phil. Acad. Nat. Sci., 1859, 190.

Sphyrapicus varius var. *ruber*, Bd., B., and R., N. A. B., ii, 1874, 544.

In its typical dress this is purely a Pacific-slope form. It has been shown by Mr. Ridgway to grade gradually into the var. *nuchalis* of the interior, which in Eastern North America gives place to the *varius*, in which the red and black workings are at their minimum.

The Red-breasted Woodpecker is decidedly northern in its distribution, being found in greatest abundance in Oregon and Washington Territory. It breeds about as far south as Fort Tejon, as I took a young bird in the mountains in August, and saw several more. Later, in October, I took a pair near Kernville, though in this extreme southern limit of its range it is rare.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
372	♀ jun.	Tejon Mountains, Cal.	Aug. 17	H. W. Henshaw ..	4.73	3.17	0.96	0.84
637	♂ ad.	Near Kernville, Cal.	Oct. 30	do	4.83	3.35	0.93	0.78
638	♂ ad.	do	Oct. 28	do	4.82	3.47	0.93	0.77

116. *Sphyrapicus thyroideus*, (Cass.).—Black-breasted Woodpecker; Williamson's Wood-pecker.

This Woodpecker was quite common in the heavy pine and red-wood forests in the Sierras, near Mount Whitney, in September, and they doubtless breed here. The males were in about equal numbers with the females, as I have always found them to be in each of the many and widely-separated localities where I have met with the species.

They are among the most silent of the tribe, not only in respect to their notes, but in their manner of procuring food, the most of this being obtained from the crevices of the bark rather than dug out with the noisy hammerings characteristic of many of the family. No other of the tribe is so constant a resident of the conifers as this. It appears to live in them exclusively, and if it ever descends into the lower regions and frequents the deciduous timber it must be only in the depths of winter.

No.	Sex.	Locality.	Date.	Collector.
488	♀ ad.	Near Mount Whitney, Cal.....	Sept. 19	H. W. Henshaw.
560	♂ ad.	..... do	Oct. 11	Do.

117. *Hylotomus pileatus*, (Linn.).—Pileated Woodpecker.

Picus pileatus, Linnaeus, Syst. Nat., i, 1766, 173.

Drycopus pilcatus, Woodh., Sitgreave's Exp. Zuñi & Col. Riv., 1854, 90 (Indian Territory, Texas, New Mexico.)

Hylotomus pileatus, Bd., B. N. A., 1858, 107.—Coop. & Suckl., P. R. R. Rep., vol. xii, pt. ii, 1860, 161.—Coop., B. Cal., i, 1870, 396.—Coues, Key N. A. B., 1872, 192.—Bd., B., & R., N. A. B., ii, 1874, 550.—Nelson, Proc. Bost. Soc. Nat. Hist., vol. xvii, 1875, 362 (California).—Bendire, Proc. Bost. Soc. Nat. Hist., vol. xviii, 1875, 160 (Camp Harney, Oregon).

This "Log Cock" is found in the Sierras as far south as latitude 37°, where I saw two individuals in October. It is not unlikely that the heavily-timbered districts may give this bird shelter throughout the extent of the Sierras. It was found near Nevada City by Mr. Nelson, but is more numerous farther north, becoming abundant, according to Dr. Cooper, near the Columbia.

118. *Melanerpes torquatus*, (Wils.).—Lewis's Woodpecker.

I did not see this species till reaching Fort Tejon, in August. It was here, and at other places in the Sierras, common in certain localities. In summer, it seems to prefer the pineries of the mountains, but in fall descends, and then inhabits the oak-groves in common with the next species, without, however, mingling with them.

In habits, the species is somewhat anomalous among its relatives. Like the Californian, it is rarely found alone, but associates in bands of many individuals, the gathering taking place as soon as the young are well on the wing. In the late fall, these companies appear to be pretty nearly stationary, not roving over the country at large, but remaining in some favorable spot where food is plenty. Here they may always be found either at play, chasing each other in and out the branches, or industriously hunting for insects. These are obtained with the expenditure of very little labor in digging, as they prefer to take them from the accessible crevices in the bark or even to capture them on the wing. Berries, too, when they can be had, form a part of their varied diet. Their peculiar manner of circling about the tree-tops in wavering circles is well known, and is one of the most noticeable characteristics of its appearance. They are endowed by nature with a shy, suspicious disposition, and always regard the appearance of man with distrust.

No.	Sex.	Locality.	Date.	Collector.
374	♂ jun.	Fort Tejon, Cal	Aug. 17	H. W. Henshaw.
418	♂ jun.	Walker's Basin, Cal.....	Aug. 27	Do.
419	♂ ad.	..... do	Aug. 27	Do.
717	♂ ad.	..... do	Nov. 11	Do.

119. *Melanerpes formicivorus*, (Swains.).—Californian Woodpecker.

The habitat of this Woodpecker, in California as in Arizona, seems to be determined by the range of the oaks; the presence or absence of these trees, their abundance or scarcity, affording a pretty sure index of the numbers of this bird. In California, they are certainly the most abundant of the tribe, as they also are in Arizona in the sections they inhabit.

The social instinct is developed in them to a degree equaled in no other species, and they are almost never found other than in large communities, while as often as otherwise they take up their residence in the oaks that overspread the farmers' dwelling. Their most curious trait is seen in their habit, shared by no other Woodpecker, of storing up a supply of acorns in holes drilled for that purpose in the trunks of trees, a custom which seems to admit of no adequate explanation. They were most industriously at this work at Fort Tejon the last of August, and during the day this seemed to keep them busy pretty nearly all the time. Judging from their cries and earnest man-

ner, as they bent themselves to the task of fitting the acorns into the holes, which had served the same purpose the last season, and perhaps many seasons before, the work must be an important one in their own estimation, whatever the object. With them, however, it is not by any means "all work and no play," but, on the contrary, the labor, if labor it be to them, is lightened by much gamboling and chasing each other in and out of the branches in circular sweeps, like boys playing at tag. Indeed, there is no reason why they should not make merry, for food is abundant and easily obtained, not only in the fall, when the acorns are thus laid away, but during all the winter, a fact which serves to make their economy appear all the more inexplicable and useless.

The species is a resident one wherever found.

No.	Sex.	Locality.	Date.	Collector.
300	♀ ad.	Fort Tejon, Cal	Aug. 7	H. W. Henshaw.
301	♂ ad.	.....do	Aug. 7	Do.
302	♀	.....do	Aug. 7	Do.
316	♂ jun.	.....do	Aug. 8	Do.
348	♂ jun.	.....do	Aug. 10	Do.

120. *Colaptes mexicanus*, (Swains.).—Red-shafted Flicker.

This Flicker is found throughout Southern California, without reference to special locality, being common both in the mountains and in the low districts. Its habits agree essentially with those of the Common Flicker of the East.

No.	Sex.	Locality.	Date.	Collector.
187	♂ jun.	Santa Barbara, Cal	July 25	H. W. Henshaw.
319	♀ jun.	Fort Tejon, Cal	Ang. 8	Do.
624	♂ ad.	Kernville, Cal	Oct. 25	Do.

STRIGIDÆ.—OWLS.

121. *Strix flammea*, Linn., var. *americana*, (Aud.).—American Barn Owl.

Strix flammea, Linn., Syst. Nat., i, 1766, 133.

Strix americana, Aud., Syn., 1839, 25.

Strix pratincola, Newb., P. R. R. Rep., vi, 1857, 76.—Bd., B. N. A., 1858, 47.—Xantus, Proc. Phil. Acad. Nat. Sci., 1859, 190.—Heerm., P. R. R. Rep., x, 1859, pt. vi, 34.—Coop., B. Cal., i, 1870, 415.

Strix flammea var. *pratincola*, B., B., & R., N. A. B., iii 1874, 13.

The Barn Owl appears to be common throughout Southern California, and in some portions, as in the swamps near Los Angeles and again in the San Bernardino Valley, I found it in great numbers. This was in June, and they had gathered themselves into communities numbering, in one instance, at least twenty. They resorted in the daytime to the dense undergrowth of the swamps or the thickest foliage of the oaks, to doze away in quiet the hours of sunlight. Dusk fairly settling down, they may be seen silently issuing by twos and threes from their shady retreats in quest of food. It becomes less numerous in the northern part of the State, though, according to Dr. Cooper, it is found to the Columbia River.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
29	♂ ad.	Los Angeles, Cal	June 17	H. W. Henshaw.	13.23	5.50	1.33	2.82
773	♀	Santa Barbara, Cal	June 14	.....do	13.75	6.00	1.35	2.85

122. *Bubo virginianus*, (Gmel.), var. *arcticus*.—Western Great Horned Owl.

This Owl is found throughout California, confining itself to shelter in the wooded districts. It is a solitary species, the pairs separating as soon as the young are out of the way. Except during the breeding-season, it hunts only by night, though its powers of vision are excellent during the brightest hours of day.

No.	Sex.	Locality.	Date.	Collector.
330	♂	Fort Tejon, Cal	Aug. 8	H. W. Henshaw.

123. *Scops asio*, (Linn.), var. *maccalli*, Cass.—Western Mottled Owl.

The little Screech Owl is a common resident of California, as it is indeed in all the wooded portions of the far west. Its habits, however, are so strictly nocturnal that its presence is easily overlooked.

I have never seen the var. *maccalli* in any but the gray plumage, nor can I ascertain that the red phase of coloration of this variety has been noted by others. The Pigmy Owl (*Glauucidium gnoma*) has been found by several observers to be quite numerous in the mountains of the State. Of the Flammulated Owlet (*Scops flammeola*), a single specimen was taken at Fort Crook. The Whitney's Owl (*Micrathene whitneyi*) occurs in the Colorado Valley, where the type-specimen was shot by Dr. Cooper. The two last may occur over much of the southern portion of the State, but their small size and nocturnal habits render them extremely liable to be overlooked.

No.	ex.	Locality.	Date.	Collector.
252	♂	Fort Tejon, Cal	July 26	H. W. Henshaw.

124. *Otus vulgaris*, (Linn.), var. *wilsonianus*, (Less.).—Long-eared Owl.

Like the Barn Owl, this species is prone to congregate together, and it is uncommon in the West for one to stumble upon one of these birds roosting in retirement without finding that the same thicket or grove shelters a number. Such was the case at Los Angeles, where the same swamps that gave protection to the Barn Owl also afforded a congenial retreat to this species, and while threading the tangled mazes I several times saw three or four start out from the same spot.

This owl is extremely averse to facing the sunlight, though when forced to do so its eyesight is pretty good.

125. *Speotyto cuniculari*, (Mol.), var. *hypugaea*, (Bon.).—Burrowing Owl.

Nowhere in the West does this Owl occur oftener or in greater numbers than in Southern California, and according to the observations of others it appears to be equally numerous in the northern part of the State.

The deserted holes of the destructive Ground Squirrel (*Spermophilus beecheyi*) furnish it with its usual abode. The birds are very often to be seen during the hours of sunlight sunning themselves at the mouths of the burrows. They are not, however, very active by day, except when disturbed in their meditations, when, with a few expositulatory notes, they fly off a few hundred yards to a neighboring hillock, whence they can keep a good lookout. Their sight under such circumstances is most excellent, and they have no difficulty when so minded in keeping themselves out of danger. Notwithstanding this, I have never seen them in pursuit of food during the day, and should say that this was obtained wholly after nightfall. In the uninhabited districts I have usually found them rather wary, but in the settled parts of California they are quite the reverse, and I have seen them sitting by the roadside paying no attention to the teams and passers-by. It is generally supposed that among other items of their fare are the young of the squirrels. This I have never confirmed, though presuming such to be the case. They are known to eat mice, lizards, and snakes.

FALCONIDÆ—FALCONS.

126. *Falco communis*, Gmel., var. *anatum*, Bon..—Duck Hawk.

This Hawk appears to be rather common in Southern California, being perhaps most so on the coast. It is numerous on the Santa Barbara Islands; also present around Kern Lake, where the water-fowl which reside here throughout the year furnish it with the most of its food.

127. *Falco columbarius*, Linn.—Pigeon Hawk.

At quite a number of localities in Southern California I noted Hawks which appeared to be of this well-known species. The following variety, however, is remarkably close to this species, and hence I may have confounded the two, and a portion of those supposed to belong here may have really been of the next variety, if that be really distinct.

The true Pigeon Hawk is, however, from the observations of others, well distributed over California.

128. *Falco columbarius*, Linn., var. *richardsoni*, Ridgw.—American Merlin.

It does not appear at all certain that this variety, established by Mr. Ridgway, will not be found to be merely a special plumage of the Pigeon Hawk. It was supposed to be confined to the interior region east of the Rocky Mountains. It is, however, found in Southern California, and I think not uncommonly, though I took but a single speci-

men. I frequently saw small Falcons, which I took to be Pigeon Hawks, but at such distances and under such circumstances that I did not succeed in procuring them.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
437	♀ jun.	Walker's Basin, Cal.....	Aug. 28	H. W. Henshaw...	8.30	5.75	0.53	1.48

129. *Falco sparverius*, Linn.—Sparrow Hawk.

In California, as throughout the West generally, the Sparrow Hawk is very numerous. The dry hills along the coast near Santa Barbara were resorted to by great numbers of these birds in July, and in following the line of the telegraph one of them was to be seen perched on one of the poles at intervals of every few yards.

No.	Sex.	Locality.	Date.	Collector.
368	♀	Tejon Mountains, Cal	Aug. 7	H. W. Henshaw.

130. *Pandion haliaetus*, (Linn.), var. *carolinensis*, Gmel.—Fish Hawk.

Present throughout California, both in the interior where the streams are stocked with fish, and on the coast, but more particularly the latter.

131. *Circus cyaneus*, (Linn.), var. *hudsonius*, Linn.—Marsh Hawk.

The open country everywhere is visited by this Hawk, which is very numerous in California. Resident in the southern part.

No.	Sex.	Locality.	Date.	Collector.
596	♂ ad.	Walker's Basin, Cal	Oct. 23	H. W. Henshaw.
597	♀	.....do.....	Oct. 23	Do.
673	♂ ad.	.....do.....	Nov. 9	Do.

132. *Nisus fuscus*, Gmel.—Sharp-shinned Hawk.

A common resident throughout Southern California. This little Hawk is of a bold, dashing disposition, preying indiscriminately upon all the smaller kinds of birds as well as upon small mammals. In procuring these, it beats through the mazes of the woods, following the edges of the thickets, and passing through the leafy openings, and secures its victim, either by surprising and dropping suddenly down upon it, or else, having started it out, pursues it in open chase and clutches it while at full speed.

133. *Nisus cooperi*, (Bon.).—Cooper's Hawk.

The Cooper's Hawk seems to be about as numerous in Southern California as its smaller relative. In summer it is not often seen in the lower districts, but will then be found to have retired to the mountains, where it nests, choosing some lofty pine as the site of its domicile. In the fall, there appears to be a very decided migration from the north, and then the low country generally is occupied by this species, which winters in the southern half of the State.

No.	Sex.	Locality.	Date.	Collector.
383	♀ jun.	Tejon Mountains, Cal.....	Aug. 17	H. W. Henshaw.
468	♂ jun.	Near Mount Whitney, Cal.....	Sept. 12	Do.
640	♂ jun.	Walker's Basin, Cal.....	Nov. 5	Do.

134. *Buteo swainsoni*, Bon.—Swainson's Hawk.

This Hawk appears to be pretty well distributed over the southern part of California, and is, in certain localities, very common. This was the case in the San Fernando Valley in July. Camping here one evening, our attention was directed to the great number of Gophers (*Spermophile hawesii*), which in large colonies inhabited some barren hills near the station. Toward dusk the place was visited by at least a dozen of these birds, which took up their positions on the little hillocks thrown up by the animals in front of their burrows, and awaited with patience the moment when a favorable op-

portunity should occur to snatch a supper. Elsewhere I have frequently seen them thus employed, and their persistence in destroying these pests should entitle them to due consideration at the hands of the farmer. Large numbers of insects, particularly grasshoppers, are destroyed by these birds, whose abilities as purveyors of food are thus of the lowest order.

No.	Sex.	Locality.	Date.	Collector.
740	♂ ad.	Los Angeles, Cal	June —	H. W. Henshaw.

135. *Buteo borealis*, (Gmel.), var. *calurus*, Cassin.—Western Red-tailed Hawk.

The present species is of almost universal distribution in the West, and, though most abundant in the mountains during summer, is by no means confined exclusively to them, but is found more or less commonly in the low country, according to the conveniences it finds for nidification. In California are seen the most extreme examples of the dark fuliginous style of coloration, which is known under the above varietal name. The lighter condition of plumage, which was known to earlier writers as *B. montanus*, is also found, though the proportion of these is not large, and probably it would not be easy to find in California an individual which was not appreciably darker than the usual type of this Hawk from the interior region. On the other hand, the extreme melanistic conditions, in which the rufous markings are only present in slight dashes here and there, and the prevailing color an extreme blackish brown, is also not common. Most individuals range between the two extremes, while no two are exactly alike.

In its wide range, the habits of this Hawk undergo but little change. It is everywhere the same heavy-winged, sluggish bird, its nature causing it to prey upon the very humblest kind of game, and even to eat carrion when this is handiest. In company with the Swainson's Buzzard, it may often be seen in the villages of the Gophers, and like that bird, is more prone to capture these animals by lying in wait for them than by seizing them from above after the manner of the true Hawks.

No.	Sex.	Locality.	Date.	Collector.
477	♂ ad.	Near Mount Whitney, Cal	Sept. 18	
532	♂ ad.	.....do.....	Oct. 7	
576	♂ ad.	Walker's Basin.....	Oct. 16	
655	♂ ad.	.....do.....	Nov. 5	

136. *Archibuteo ferrugineus*, (Licht.).—Californian Squirrel Hawk.

In my note-book I find reference made to some large Hawks which, in company with the Swainson's, I saw in a Gopher village in the San Fernando Valley in July, and which I believed to be of this species. It does not appear, however, to be at all common in Southern California in summer, but becomes numerous in fall, making its appearance either from the high mountains, or, as is more probable, from farther north. It is more active in its motions and more Falcon-like in its method of hunting than either of the preceding species. It is usually seen beating over the open country on vigorous wing, and keeping a few feet above the ground, ready on the instant to close with any unlucky mammal it may chance to surprise. As implied by its name, it is a determined enemy of the Ground Squirrels, and, with the other two species, must annually destroy an immense number of them. The *A. sanctijohannis* is, according to Dr. Cooper, a winter visitor to the State. I saw in possession of Mr. Gruber, of San Francisco, a fine specimen of this bird, representing the most extreme condition of melanism. It was shot, I believe, near San Francisco.

137. *Elanus Cucurus*, (Vieillot).—Black-shouldered Kite.

This species does not appear to occur in the southern parts of California, where none were met with by our parties. It is found about San Francisco in considerable numbers, and is there a resident.

138. *Haliaëtus leucocephalus*, (Linn.).—White-headed Eagle.

This Eagle is an abundant resident of California, particularly along the sea-coast. It is also not uncommon in the mountain districts. The islands in the Santa Barbara Channel are the resort of many pairs that remain during the year. The broken ledges on the faces of the cliffs, sometimes overhanging the ocean, afford favorite spots for their nests. They are said to annually destroy many of the lambs. I am informed by Lieutenant Carpenter that this Eagle at the mouth of the Columbia River is exceed-

ingly numerous, and that here its habits of feeding upon carrion are as regular and fixed as those of the true Buzzards. Its chief dependence is on fish, more particularly Salmon, of which vast numbers are cast up by the waves. On one occasion, he found half a dozen of these birds feeding upon the flesh of a putrid ox. With this they had become so gorged as to be utterly unable to fly. One of them had so completely filled itself with the foul food that a large piece which it had partially swallowed it was utterly unable to force further down, and in this situation, unable to move, it was approached and knocked on the head with a wipping-stick.

In this region, they nest almost entirely on the tall pines.

CATHARIDÆ.—AMERICAN VULTURES.

139.—*Pseudogryphus Californianus*, (Shaw).—California Vulture.

Our opportunities for an acquaintance with this Vulture were most brief and unsatisfactory, and were limited to seeing two or three individuals warring on the wing in the mountains. So far as I could learn, they descend rarely into the valleys during the summer months, and only then when attracted by the sight of some dead animal; their keen sight enabling them to detect the presence of food at very long distances. Dr. Taylor informed me that at Santa Barbara they were of quite common occurrence, remaining, however, most of the time in the neighboring mountains. I hear they breed, seeking the shelter of eaves, in the most inaccessible situations.

It seems probable that the numbers of this huge bird have very much diminished during the last few years. So large and conspicuous an object could scarcely fail to attract the attention of any chance rover of the wilderness, yet its presence was almost undetected by our parties. As is well known, this bird is easily killed by strychnine, and as this poison has been in almost constant use for a term of years in the destruction of wild animals, it seems highly probable that great numbers of these birds have suffered a like fate from eating the carrion.

According to the observations of earlier naturalists, it was numerous throughout most of California, and extended its range on the north to the Columbia. Near Mount Whitney, in September and October, I frequently saw the carcasses of sheep which had lain for days, and in one instance the body of a huge Grizzly Bear, which had died from poison, was in the final stages of decomposition, yet in no case had any of these been visited by Vultures, a fact which seemed to argue their total absence from this region.

140. *Rhinogryphus aura*, (Linn.).—Red-headed Vulture.

This bird is far more numerous throughout Southern California than its larger relative. It is less of a mountain-loving species, and is, indeed, much less shy and more domestic in its habits, coming freely about the ranches and houses whenever carrion or refuse of any kind is to be had. I saw numbers of them on the islands off Santa Barbara, and think likely they nest there.

COLUMBIDÆ.—PIGEONS.

141. *Columba fasciata*, (Say).—Band-tailed Pigeon.

This Pigeon occurs abundantly in California, retiring to spend the season of reproduction in the mountains, where it resorts very much to the pineries to nest. It does not appear, however, for some cause or other, to be found in any numbers in summer in the more southern portions of the State, and was not seen by us till in the fall, when, in the course of the migrations, it makes its appearance in bands from the far north. In November I often saw them in flocks of from ten to one hundred, flying swiftly about from one oak-grove to another, for, at this season, acorns form their chief, indeed almost their sole, food. Their shyness now is very remarkable, and it is probably due to the fact that in their passage from the north they are compelled to run the gauntlet of hundreds of gunners, who in the neighborhood of cities and towns eagerly pursue them for the market.

142. *Zenaidura carolinensis*, (Linn.).—Carolina Dove.

The Turtle Dove is very numerous in Southern California, its limit northward on this coast being reached at about the forty-ninth parallel, as in other portions of the country.

The dry sandy deserts, which repel nearly all the feathered tribe, form favorite resorts for these Doves. Their powerful wings easily bear them out on the barren wastes, where, it might seem, they would find little to attract them, but where they secure a good supply of seeds from plants whose hardy natures enable them to withstand the drought. The very nature of this dry hard food renders frequent visits to water a necessity, and hence, in the vicinity of any of the rare pools that grace these saharas, the Turtle Dove may always be seen.

TETRAONIDÆ.—GROUSE.

143. *Canace obscurus*, (Say.)—Dusky Grouse.

This Grouse is an inhabitant of high latitudes, but finds in the Rocky and Sierra Nevada Mountains a climate and vegetation analogous to the far northern districts. In California, it is found in both the Coast and Sierra ranges as far south as latitude 35°, and probably even lower. It was present, though not very common, in the mountains near Fort Tejon, and was rather numerous in the region about Mount Whitney. Its presence depends much upon the conifers. It cares less for the pines, but the thick tangled forests of spruce, fir, and tamarack will rarely be entered without grouse sign being very soon apparent. In the Sierras, they are very fond of staying about the vicinity of the little grassy eienagas that are found scattered here and there on the flanks of the mountains, sometimes entirely environed with the coniferous trees.

Lieutenant Carpenter, who has enjoyed most excellent opportunities for observing this bird both in Oregon and the Rocky Mountains, thus speaks of their habits: "Late in the fall, the Dusky Grouse disappear entirely from the grounds frequented by them in summer. At this latter season, their range is much wider. They leave, to a great extent, the thick woods, and are found much in the open glades, where many kinds of berries, as the wild strawberry, afford them a varied and luscious fare. About November, however, they wholly disappear, and a person looking for game in the places where in summer there were an abundance of these birds, would now see no sign of their presence. The idea credited by some, that they have migrated to warmer climes, or that they are passing the long winter hidden away in a torpid state, is alike erroneous. In the Rocky Mountains, about the time of the first heavy snows, they betake themselves to the densest pine-woods, where they live entirely in the conifers. The buds of the pine and spruce now furnish them their only food, and upon these they subsist till the next spring, when the genial sun, with returning warmth, having released the streams and removed the snow, they again descend to mother-earth. In Oregon, too, even along the coast where no snow falls, this same habit obtains. They leave the ground entirely, resort to the pines, and their terrestrial mode of life does not begin till the next summer, when berries and small seeds afford a greater attraction than their usual piny fare. About the 1st of April, the males begin their booming notes, which may now be heard coming from all parts of the forest as the emulous birds begin their courtships. It is at this time that many are shot, the gunners now having a sure guide to their prey in the love-notes, which seem to proceed from the mid-air, as the birds give utterance to them when perched on the branch of some tall pine."

These notes, which are so characteristic of the species in Washington Territory and Oregon, do not appear to have been noticed by any observer in the Rocky Mountains, and Lieutenant Carpenter tells me that not only has he himself not heard this, but all his inquiries among hunters and trappers have failed to establish this habit as belonging to the bird in the various parts of the Rocky Mountains he has visited.

PERDICIDÆ.—QUAILS.

144. *Lophortyx Californicus*, (Shaw).—California Valley Quail.

Tetrao californicus, Shaw, Nat. Miss., pl. 345.

Callipepla californica, Newb., P. R. R. Rep., vi, 1857, 92.—Heerm., ibid., x, 1859, pt. vi, 60.

Lophortyx californica, Bd., B. N. A., 1858, 644.—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 192.—Bd., Xantus, ibid., 305 (Cape St. Lucas).—Coop. & Suckl., P. R. R. Rep., vol. xii, pt. 11, 1860, 225.—Coop., B. Cal., i, 1870, 549.—Coues, Key N. A. B., 1872, 238.—Nelson, Proc. Bost. Soc. Nat. Hist., vol. xvii, 365 (California).

The Valley Quail, as its name implies, is an inhabitant of the lower districts in California, where it is found overspread over all the country to the west of the Sierra Nevada range. On the north it reaches to the Columbia River. The most extreme limit at which I found it was in the mountains near Fort Tejon, where I saw the species on several occasions at an altitude of 6,000 feet. At this height, I found the young. Here they meet the Mountain Quail, or rather the ranges of the two were found at this point to overlap each other; for the Mountain Quail was found somewhat lower than this. Such, however, is rarely the case, as the Valley Quail is a much less hardy bird than its mountain-loving relative, and courts the warmth of the pleasant valleys. As the number of its natural enemies, in the shape of wild animals and snakes, has been very much diminished through the agency of man, and its increase goes on almost without check, its numbers in some sections of the State are simply enormous. On the island of Santa Cruz, the attempt has been made to introduce them, but with only measurable success, and it is not likely that they will ever there become very numerous; for the number of foxes on this island would be sufficient to keep them in check, were every other condition favorable.

The average time for laying in Southern California seems to be along in April or

early May, and by the last of June large numbers of the young are out and able even to fly short distances. The time, however, for nesting must be quite variable, or else the great disparity in the ages of the broods is due to the fact that the later nestlings are the product of a second clutch of eggs, the first having perhaps been destroyed. Thus, though I have seen many young able to fly in the month of June, I have found others of about the same size and age late in August. Two broods may occasionally be reared in a season.

As soon as the young are out, it is usual for several broods to unite together, and in this way it is not unusual to find in one company birds representing several progressive stages of plumage, and more or less advanced toward maturity. Within the limits of its range, this Quail affects almost all situations. Often during the day, the bands will be found in the vicinity of water, the nature of their food requiring much to soften and aid in its digestion. The bushy pastures, grain fields, and the foot-hills, all in turn invite attention, and are visited by the busy flocks that thus spend the greater part of the day in a constant search for food. Whether it is a constant habit with them to seek shelter during the hottest part of the day, I do not know; but I have often found the bevvies about noon in the shade of the bushes that fringe the margin of some favorite spring, where they have come to slake their thirst and apparently pass the heated hours of day in shady seclusion. This I think is a fixed habit with them. In October and November, the young birds are full-grown, and as strong on the wing as their parents.

They now gather into very large bevvies, or rather an assemblage of bevvies, sometimes a hundred or more, though the average would be less than this. As a rule, their ways are not such as to endear them to the sportsman; for they are apt to be wary, and, unless under specially favorable circumstances, are not wont to lie closely. I have, however, flushed a large bevy contiguous to a bushy pasture where the scrub was about knee-deep, with cattle-paths through it, and have had glorious sport. The birds lay so close as to enable me to walk almost over them, when they got up by twos and threes, and went off in fine style. The sportsman may now and then stumble upon such chances, but they do not come often. A bevy once up, off they go, scattering but little unless badly scared, the main body keeping well together, and having flown a safe distance they drop, but not to hide and be flushed one after another at the leisure of the sportsman. The moment their feet touch firm ground, off they go like frightened deer, and if, as is often the case, they have been flushed near some rocky hill, they will pause not a moment till they have gained its steep sides, up which it would be worse than useless to follow. Should they, however, be put up hard by trees, they will dive in among the foliage and hide, and there standing perfectly motionless will sometimes permit one to approach to the foot of the tree they are lodged in ere taking wing.

They roost always in bushes or trees, and almost invariably in those which are hard by water, which they resort to in the early morning ere setting forth on the business of the day.

When anxious and disturbed, the members of the flock call to each other in querulous tones, the notes resembling the syllable *pit, pit*, constantly repeated; this, too, just as they are taking to wing. Besides this, the males have a loud call, which answers, when the band has been dispersed, to bring them together. This has been variously interpreted. It resembles perhaps as much as anything, when put into English, the words *come-right-here*, the last syllable lengthened and much emphasized.

No.	Sex.	Locality.	Date.	Collector.
83	♂ ad.	Santa Barbara, Cal.	June 26	H. W. Henshaw.
92	♂ ad.	.....do.....	June 26	Do.
93	♀ ad.	.....do.....	June 26	Do.
94	♀ ad.	.....do.....	June 27	Do.
116	♂ ad.	.....do.....	June 28	Do.
117	♀ ad.	.....do.....	June 28	Do.
253	♂ ad.	Fort Tejon, Cal.	July 26	Do.
254	♂	.....do.....	July 26	Do.
278	jun.	.....do.....	Aug. 2	Do.
578	♂ ad.	Near Kernville, Cal.	Oct. 19	Do.
579	♂ ad.	.....do.....	Oct. 19	Do.
580	♀	.....do.....	Oct. 19	Do.
580 A	♀	.....do.....	Oct. 19	Do.
581	♀	.....do.....	Oct. 20	Do.
581 A	♀	.....do.....	Oct. 19	Do.
587	♀	.....do.....	Oct. 20	Do.
588	♀	.....do.....	Oct. 23	Do.
589	♂ ad.	.....do.....	Oct. 23	Do.
653	♂ ad.	Walker's Basin, Cal.	Nov. 5	Do.
654	♂	.....do.....	Nov. 5	Do.
716	♂	.....do.....	Nov. 5	Do.
725	jun.	Fort Tejon, Cal.	July 26	Do.
726	jun.	.....do.....	July 26	Do.

145. *Oreortyx picta*, Douglas.—Mountain Quail.

Ortyx picta, Dougl., Trans. Linn. Sc., xvi, 1829, 143.

Callipepla picta, Newb., P. R. R. Rep., vi, 1857, 93.—Heerm., ibid, x, 1859, Birds, 61.

Oreortyx pictus, Bd., B. N. A., 1858, 642.—Xantus, Proc. Phila. Acad. Nat. Sci., 1859, 192.—Coop. & Suckl., P. R. R. Rep., vol. xii, pt. ii, 1860, 225.—Coop., B. Cal., i, 1870, 546.—Coues, Key N. A. B., 1872, 237.—B., B., & R., N. A. B., iii, 1874, 475, pl. 63, f. 5.—Nelson, Proc. Bost. Soc. Nat. Hist., vol. xvii, 364 (California).

This, the most beautiful of all our game-birds, is limited in its distribution to California and Oregon, and, as its name well implies, is strictly a bird of the mountains. We found it in the mountains near Fort Tejon, and in the Sierras in a sufficient number of localities as to justify the belief that its distribution in Southern California is at least quite general, and dependent only upon the mountainous nature of the country. In summer, it is not found lower than 4,000 feet, and is not so common at this elevation as somewhat higher. Above 9,000 feet, it was not seen, and this is presumably about its limit. Its habitat is thus complementary to that of the Valley Quail, the higher and lower limits of either species occasionally overlapping each other. It seems nowhere to be an abundant species. As compared with the preceding, the bevies are very small, and I do not remember to have ever seen more than fifteen together, oftener less. It is a wild, timid bird, haunting the thick chaparral-thickets, and rarely coming into the opening. When a band is surprised, they are not easily forced on the wing, but will endeavor to find safety by running and taking refuge in the thickness and impenetrability of their favorite thickets. If forced, however, they rise vigorously and fly swiftly and well, and sometimes to a considerable distance, and then make good their escape by running. During the heat of midday, they will be found reposing under the thick shade of the chaparral, and there they remain till the cooler hours invite them to continue their quest for food. When the covey has been scattered, the males have a loud call, which consists of a series of notes clearly given, the whole recalling to mind the notes of the Golden Flicker. Besides this, both sexes have the more commonly heard piping-notes, which they emit just as they take to wing, and when they are agitated, or moved by fear.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
283	♂ ad.	Mountains near Fort Tejon, Cal	Aug. 3	H. W. Henshaw.	5.50	3.70	0.60	1.41
417	♂	.....do.....	Aug. 19	....do.....	5.25	3.65	0.57	1.47
724	♀ ad.	.....do.....	Aug. 1	....do.....	5.30	3.43	0.60	1.40
723	.....	.....do.....	Aug. 1	....do.....	5.40	3.27	0.62	1.37
780	♀ ad.	.....do.....	Aug. 1	....do.....	5.25	3.45	0.57	1.45
779	♀ ad.	.....do.....	Aug. 1	....do.....	.....	.....	.....	.....
640	♂ ad.	Walker's Basin, Cal.....	Nov. 5	....do.....	5.43	3.77	0.58	1.48
700	♂	.....do.....	Nov. 5	....do.....	5.43	3.53	0.58	1.47
701	ad.	.....do.....	Nov. 5	....do.....	.....	.....	.....	.....
702	♂ ad.	.....do.....	Nov. 5	....do.....	.....	.....	.....	.....

CHARADRIIDÆ.—PLOVERS.

146. *Aegialitis vocifera*, (Linn.).—Killdeer Plover.

By the side of every lake and along all the streams, as well as on the shores of California, this Plover is found in great abundance. It is only partially migratory, numbers remaining in Southern California till the ensuing spring sends them farther north.

The Mountain Plover (*A. montana*) occurs and is numerous in certain localities in Southern California, as on the plains about Los Angeles.

No.	Sex.	Locality.	Date.	Collector.
671	♀ jun.	Walker's Basin, Cal.....	Nov. 9	H. W. Henshaw.

Charadonis cantianus, Lath., Birds, vol. viii, 328.—Heerm., P. R. R. Rep., x, 1859, pt. vi, 64.

Aegilitis (Leucopolius) nivosa, Cass., Bd., B. N. A., 1858, 696.—Coues, 1866, 274 (San Pedro, Cal.).

Aegilitus cantianus, Coues, Key, 1872, 245.

147. *Aegialitis cantianus*, Lath., var. *nivosa*, (Cass.).—Snowy Plover.

This species is an abundant one on the coast of California, though by no means a strictly coastwise bird. I did not see it in the interior, though Mr. Ridgway found the species at Great Salt Lake, where it was breeding. At Santa Barbara, it was numerous, frequenting here only the sandy shores, not following the creeks inland, and never

visiting the marshes, though within a few yards of its breeding-ground. Its habits seemed exactly like those of the common Piping Plover, and their notes are very similar. Its food consists of all sorts of worms and marine crustacea which it finds close to the water's edge, following the retreating waves down and scurrying back as they come rolling in.

July 7, I found two broods of young which had left the nest but a few hours before. They were clothed in down, and were yet so weak as scarcely to be able to stand. Subsequently I found quite a number of nests containing eggs. The spot selected for a breeding-ground was a strip of bare white sand, a hundred yards, perhaps, from the ocean. The nest was simplicity itself. In all but one instance the eggs were deposited in a slight hollow scratched in the sand, without lining of any sort. In the exceptional case the owners must have been of an artistic turn of mind, for they had selected from along the shore little bits of the pearly nacre, the remnants of broken sea-shells, and upon a smooth lining of this material were placed their treasures. The effect of the richly-colored eggs as they lay on the cushion of shining nacre was very pleasing. So slight is the contrast between the eggs and the drifted sand about them that they would be difficult enough to find were it not for the tracks about the nest. As the mates came to relieve each other from setting or to bring each other food, they alighted near the nest, and thus for a little distance about each one was a series of tracks converging to a common center, which too surely betrayed their secret. Great was the alarm of the colony as soon as my presence was known, and, gathering into little knots, they nervously attended my steps, following at a distance with low sorrowful cries. The female, when she found her nest was really discovered, hesitated not to fly close by, and used all the arts which birds of this kind know so well how to employ on like occasions. With wings drooping and trailing on the sand, she would move in front till my attention was secured, when she would fall helplessly down, and burying her breast in the soft sand, present the very picture of utter helplessness, while the male with the neighboring pairs expressed his sympathy with loud cries. The full nest complement appears to be three, and in no instance did I find more. These are of a light clay-color, numerously marked with blotches and scratchy markings of black. In size and appearance they approach most closely to those of *A. melodus*, but may be easily distinguished by the different style of the spotting.

Examining a good series of the eggs of *melodus* in the Smithsonian, I find them to vary among themselves but little in the character of their markings. These take the form of small circular dots, very rarely becoming aggregated into blotches, and without pen-like scratchings. Those of *nivosus* are more heavily marked with irregular blotches, while the scratchy marks are conspicuous. Three sets measure, respectively, 1.30 by 0.93; 1.27 by 0.92; 1.25 by 0.93; 1.29 by 0.93; 1.27 by 0.89; 1.24 by 0.95; 1.22 by 0.90.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
178	♂ ad.	Santa Barbara, Cal.....	July 4	H. W. Henshaw.	4.23	1.93	0.60	0.97
179	♂ ad.	..... do	July 4	do	4.22	2.00	0.64	0.92
180	♂ ad.	..... do	July 4	do	4.20	1.98	0.62	0.98
181	♀ ad.	..... do	July 4	do	4.08	1.85	0.61	6.88
209	♂ ad.	..... do	July 7	do	4.02	1.98	0.64	0.96
210	♂ ad.	..... do	July 4	do	4.08	2.08	0.63	0.92
212	♂ ad.	..... do	July 7	do	3.90	1.92	0.59	0.92
214	♀ ad.	..... do	July 7	do	4.20	1.97	0.60	0.92
216	♀ ad.	..... do	July 7	do	4.13	1.96	0.63	0.98
217	♀ ad.	..... do	July 7	do	4.13	2.03	0.63	0.93
213	♂ ad.	..... do	July 7	do .....	.....	.....	.....	.....
215	♂ ad.	..... do	July 7	do .....	.....	.....	.....	.....
218	♂ ad.	..... do	July 7	do .....	.....	.....	.....	.....
219	♂ ad.	..... do	July 7	do .....	.....	.....	.....	.....
230	♂ ad.	..... do	July 8	do .....	.....	.....	.....	.....
232	♀ ad.	..... do	July 8	do .....	.....	.....	.....	.....
233	♂ ad.	..... do	July 8	do .....	.....	.....	.....	.....
234	♀ ad.	..... do	July 8	do .....	.....	.....	.....	.....
235	♀ ad.	..... do	July 8	do .....	.....	.....	.....	.....
236	♂ ad.	..... do	July 8	do .....	.....	.....	.....	.....
237	♂ ad.	..... do	July 8	do .....	.....	.....	.....	.....
220	♀ jun.	..... do	July 8	do .....	.....	.....	.....	.....
760	jun.	..... do	July 8	do .....	.....	.....	.....	.....
761	jun.	..... do	July 8	do .....	.....	.....	.....	.....

HÆMATOPIDÆ.—OYSTER-CATCHERS.

148.—*Hæmatopus niger*, Pallas.—Black Oyster-eatehler.

Hæmatopus niger, Pallas, 'Zoog. Rosso-Asiat.', ii, 1811, 131.—Towns., Narr., 1839, 348.—Cass., Bd. B. N. A., 1854, 760.—Coop. & Suckl., P. R. R. Rep., xii, pt. ii, 1860, 233.—Coues, Key N. A. B. 1872, 246.

Hæmatopus townsendii, Heerm., P. R. R. Rep., 1859, 65.

This curious bird is found in considerable numbers on the island of Santa Cruz, and, as I was informed, on the others of the group. They much of the time frequented the little islets which were separated from the main islands by narrow channels, probably finding on them breeding-grounds safe from the intrusion of all enemies. Their short, extremely stout legs and feet would seem to adapt them for a life among the rocks, and they probably do obtain much of their food among the kelp and sea-weed that covers the slippery rocks and shelters all sorts of crustaceans and mollusks. The long, strong, wedge-like bill is admirably adapted for the purpose of prying open the bivalve shells. On the island, however, they seemed to obtain a plenteous supply of food by a much easier and readier method, and did not resort to this mode at all. They fed much of the time on the sandy beaches, where the Sand-pipers, had there been any, would have resorted, and, like them, found all they wanted on the surface, where it was cast up by the waves. Their stout robust form would not seem to indicate much agility, and their movements were rather clumsy, as though they felt a little out of place. On the level beaches, they were quietest when they followed the retreating waves to the lowest point, whence they would have time to snatch a titbit and run back in season to avoid the on-coming surf. The birds were not at all shy, and would permit me to approach easily enough within 30 yards of them as they rambled along the beach, pausing now and then, and looking back as if not quite assured of my intentions.

Of all the feathered tribe that frequented the island, they were the noisiest, and their harsh vociferous cries could be heard all day long, coming from their island strongholds.

After some search, I succeeded in finding two nests: the first containing a single freshly laid egg was taken June 6, on the extreme point of a high cliff jutting over the sea; the second, a few days later, was found on one of the islets adverted to. The nests proper were rude enough affairs, being simply slight hollows made in the pebbly detritus, which in each case had been added to by bits of stone brought from elsewhere. In neither case was there any grass or other lining softer than the stones themselves. The two eggs in one case were slightly incubated, and probably were all that would have been laid. These are indistinguishable from those of the better known species *H. palliatus*. Their ground-color is a faint, grayish drab, profusely spattered with irregular blotches of black. They measure 2.27 by 1.59; 2.29 by 1.48; 2.18 by 1.52.

The Surf-bird (*Aphriza virgata*) was not found by us on the island of Santa Cruz, and I do not think it breeds on this group. Heermann mentions finding numbers on the Farallon Islands in June, and here it is likely it remains all summer. Mr. Gruber showed me a fine specimen which he obtained at Santa Barbara in spring. It seems to be a rather uncommon species on the Californian coast, and one whose habits are very little known.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
8	♀ ad.	Santa Cruz Island, Cal.	June 4	H. W. Henshaw.	9.75	4.73	3.00	2.03
727	♀ ad.	do	June 4	do	10.25	5.03	3.12	2.12
728	♂ ad.	do	June 4	do	9.50	4.70	2.73	1.87
729	♂ ad.	do	June 5	do	10.15	4.83	2.88	2.05
730	♀ ad.	do	June 5	do	10.50	5.02	2.75	2.04

149. *Strepsilas melanoleuca*, Vigors.—Black Turnstone.

This bird occurs on the islands, and all along the coast of California, during the spring and fall migrations. All pass to high northern latitudes to breed.

The *S. interpres* also occurs along the coast.

RECURVIROSTRIDÆ.—AVOCETS; STILTS.

150. *Recurvirostra americana*, Gmel.—American Avocet.

The Avocet occurs in California, though not, I think, in such extreme abundance as in many sections in the interior. On the island of Santa Cruz I saw several, and these had paired, and were probably breeding. As there were no ponds they were driven to

a different mode of life from their usual one, and lived on the beaches, picking up sea-slugs and small crustaceans from the surface. They were present near Los Angeles in June, and apparently on their return journey from more northern parts had stopped in quite large flocks at Kern Lake, where it is possible some may remain all summer.

No.	Sex.	Locality.	Date.	Collector.
738	Ad.	Santa Cruz Island, Cal.	June 10	H. W. Henshaw.
739	Ad.	do	June 10	Do.

151. *Himantopus nigricollis*, Vieill.—Black-necked Stilt.

The Stilt was present in large numbers on the borders of Kern Lake August 15. Usually when I have found these two birds together, the Avocets have far outnumbered the Stilts. Here the case was reversed, and the number of the latter species was largely in excess of any other bird found here.

No.	Sex.	Locality.	Date.	Collector.
355	♂ jun.	Kern Lake, Cal.	Aug. 15	H. W. Henshaw.

PHALAROPHIDÆ.—PHALAROPES.

152. *Lobipes Hyperboreus*, (L.).—Northern Phalarope.

This Phalarope is numerous along the coast in Washington Territory, and probably also in California during the migrations. I shot a single one, evidently a wanderer, on a small meadowy mountain-stream in the Sierra Nevada September 15, at an elevation of about 9,000 feet.

No.	Sex.	Locality.	Date.	Collector.
473	♂	Head of Kern River, Cal.	Sept. 15	H. W. Henshaw.

SCOLOPACIDÆ.—SNIPES.

153. *Gallinago Wilsoni*, (Temm.).—Wilson's Snipe.

This Snipe is very abundant in all localities suited to its wants during the migrations, and probably more or less winter in the southern part of the State.

154. *Macrorhamphus griseus*, (Gmel.).—Red-breasted Snipe.

During the migrations, occurring in large flocks along the coast, and also on the lakes and ponds in the interior of the State. Present in numbers at Kern Lake in August.

155. *Ereunetes pusillus*, (Linn.).—Semi-palmated Sandpiper.

I saw a small flock of these "Pups" on the sea-shore near Santa Barbara, in July. Shooting several, I found, upon dissecting, that they were barren birds, which accounted sufficiently for their presence here at this time. During the migrations it is abundant.

No.	Sex.	Locality.	Date.	Collector.
221	♀	Santa Barbara, Cal.	July 7	H. W. Henshaw.
222	♀	do	July 7	Do.

156. *Calidris arenaria*.—Sanderling.

This bird occurs more or less numerously on the coast during the migrations. I took a single specimen on the Santa Cruz Island in June. Its journey northward had been interrupted by an injury, possibly a gunshot wound.

No.	Sex.	Locality.	Date.	Collector.
740	Ad.	Santa Cruz Island, Cal.	June —	H. W. Henshaw.

157. *Limosa fedoa*, (Linn.).—Great Marbled Godwit.

The Godwit appears in large flocks on the Californian coast in spring and fall. June 16, a fine specimen was brought me by Mr. J. A. Hasson, who shot it on some salt-ponds near Los Angeles, where he stated he saw many others. The bird was in worn breeding-dress, and I am inclined to judge that many find here their summer-home. According to Dr. Cooper, it abounds at Shoalwater Bay, Washington Territory, though he thinks all pass north to breed. The Willet (*Totanus semipalmatus*) also occurs abundantly on the coast.

No.	Sex.	Locality.	Date.	Collector.
23	Ad.	Los Angeles, Cal.....	June 16	H. W. Henshaw.

158. *Totanus melanoleucus*, (Gmel.).—Greater Yellowlegs.

Occurs numerously during the migrations both on the coast and in the interior. I am not aware that the Lesser Yellowlegs has actually been recorded from the Pacific coast. Its occurrence here is, however, extremely probable, as the range of the two species is almost exactly coincident.

159. *Tringoides macularius*, (Linn.).—Spotted Sandpiper.

An individual of this species seen now and then on the fresh-water streams of the interior.

160. *Heteoscelus incanus*, (Gm.).—Wandering Tattler.

The Wandering Tattler, as this bird is aptly named, possesses a very extreme distribution, being found on the islands of the Pacific generally, and from Russian America to Australia. It has been found in Washington Territory by Dr. Cooper, where, however, it was not common. Santa Cruz Island was the only place where I enjoyed the opportunity of seeing the bird, though it is found, as I learned from others, on the other islands also. Captain Forney, of the Coast Survey, who has paid considerable attention to the birds of these islands, presented me with a specimen, one of quite a number he secured on San Miguel, where I should judge the bird must occur in considerable numbers. They appear not to be a bird of the sandy shores at all, but resort exclusively to the rocks covered with sea-weed, where they follow the tide as it ebbs and flows, running back and forth and picking up the minute worms and marine animals, of which they find a great abundance. In motions, they simulate exactly the little Spotted Sandpiper, and have the same curious "tip-up" motion of the body, which they indulge in at moments of rest from feeding or when attentively looking about them. They fly, too, with the same deliberate wing-beats, the pinions being slightly decurved, the tips pointed downward. Their voices are, however, wholly different, and the notes are very loud and harsh when compared with the smooth whistle of the other species. I found them usually solitary and quite watchful and full of distrust, though I found myself once or twice within a few feet of one of them, and was allowed a most excellent chance to watch their motions. This was June, and the species was unquestionably paired and breeding, though I obtained no hint of their method of nidification.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
6	♀ ad.	Santa Cruz Island, Cal	June 4	H. W. Henshaw...	6.70	3.13	1.54	1.37

161. *Numenius longirostris*, Wils.—Long-billed Curlew.

This Curlew is numerous during the migrations. It was present in large flocks on the borders of Kern Lake in August. The Esquimaux Curlew (*N. borealis*) is also said by Heermann to be common in the San Francisco market.

TANTALIDÆ.—IBISES.

162. *Ibis thalassinus*, Ridgw.—Glossy Ibis.

This Ibis is probably a summer resident in suitable localities throughout the interior of the State. It was a common bird at Kern Lake in August; flocks of considerable size being seen there.

ARDEIDÆ.—HERONS.

163. *Ardea herodias*, Linn.—Great Blue Heron.

Of common occurrence.

164. *Herodias egretta*, (Gmel.).—Great White Egret.

This Heron was seen on quite a number of different occasions in various parts of Southern California. It appears to be a rather common summer resident. The little Egret (*Garzetta candidissima*) is also said by Heermann to be numerous.

165. *Butorides virescens*, (Linn.).—Green Heron.

Common.

166. *Botaurus minor*, (Gmel.).—Bittern.

Quite numerous on the marshes throughout the State.

GRUIDÆ.—CRANES.

167. *Grus canadensis*, (Linn.).—Sand-hill Crane.

Of common occurrence in California.

RALLIDÆ.—RAILS.

168. *Rallus elegans*, Aud.—King Rail.

This Rail was common in certain marshy spots close to the sea at Santa Barbara. They retired during the day into the beds of tall rushes, which served to screen them from all enemies, as well as from the glaring sun. By July 1 the young were out and able to accompany their parents after food. They began to be active about sunset, heralding the approach of dusk by loud outcries. They were not altogether quiet during the day, and they are probably forced to forage more or less during the uncongenial hours of day to satisfy the hunger of their young.

169. *Rallus virginianus*, Linn.—Virginia Rail.

This is perhaps the most generally distributed of the family throughout the United States. It appears to be quite numerous in Southern California; as much so in certain localities as anywhere in the East. I found it abundant at Walker's Basin in November, and it probably winters throughout the southern half of the State. The Sora Rail (*Porzana carolina*) was not noticed by us, nor do I find it recorded from the west coast. The Black Rail (*P. jamaicensis*) appears to be fully as numerous in California as in any other part of its habitat. From information from Mr. Gruber I should judge it was rather common in the extensive tulle swamps in the State. It has also been found by this gentleman on the Farallone Islands. Its small size and skulking habits, combined with the inaccessibility of its swampy haunts, render the procuring of specimens exceedingly difficult.

170. *Fulica americana*.—Coot; Mud-hen.

Very abundant on the fresh-water ponds throughout the State where they breed. The species is a resident one, though a migration in spring and fall occurs with perfect regularity.

ANATIDÆ.—GESE AND DUCKS.

171. *Anser hyperboreus*, Pallas.—Snow-goose.

Great numbers of this Goose were seen on the prairies and in the stubble-fields south of San Francisco in November.

172. *Anser albifrons* var. *gambelii*, Hartlamb.—White-fronted Goose.

Immense numbers of this species winter in California, returning from their northern breeding-grounds in October and November.

173. *Branta canadensis*, (Linn.).—Canada Goose.

Very numerous in fall and winter.

174. *Branta canadensis*, (Linn.), var. *hutchinsii*, Rich.—Hutchins's Goose.

Vast numbers throng the State, both along the coast and on the interior prairies.

175. *Anas boschas*, Linn.—Mallard.

The Mallard is found in great abundance in fall and winter, while many doubtless remain to breed in the lakes. It is found on the mountain-streams to a height of even 9,000 feet. In fall, it is quite terrestrial in its mode of life, and gleans a rich harvest from the grain-fields.

176. *Dafila acuta*, Linn.—Pin-tail.

Numerous during the migration.

177. *Chaulclasmus streperus*, Linn.—Gadwall.

More or less numerous in the fall and winter. I saw numbers in the San Francisco market in November.

178. *Mareca americana*, (Gmel.)—American Widgeon.

Numbers seen in Walker's Basin in November. Abundant in winter.

179. *Querquedula carolinensis*, (Gmel.)—Green-winged Teal.

Abundant on the fresh-water courses throughout the State. Both the Blue-winged and the Red-breasted Teal occur in abundance in California; the latter as a summer resident leaving the State early in fall for farther north.

180. *Spatula clypeata*, (Linn.).—Shoveler.

Very numerous in the fall and winter.

181. *Fuligula marila*, (Linn.).—Greater Blackhead.

Abundant in fall and winter; chiefly along the coast.

182. *Fuligula ferina*, (Linn.), var. *americana*, Eyton.—Redhead.

Common in fall and winter.

183. *Fuligula vallisneria*, (Wils.).—Canvas-back Duck.

This Duck was present, though not numerous, in Walker's Basin in November. Dr. Newberry speaks of the species as being found in large numbers in the bays and rivers of the State in fall and winter.

184. *Bucephala clangula*, (Linn.).—Golden-eye.

An abundant species, visiting the State in fall and remaining through the winter. I was informed by Mr. Gruber that the Barrow's Golden-eye (*B. islandica*) was found occasionally in the San Francisco markets, where he had procured specimens. As on the east coast, it breeds quite far to the north, descending chiefly along the coast in winter.

185. *Bucephala albeola*, (Linn.).—Butter-ball.

Perhaps the most common and widely-distributed of the genus.

186. *Harelda glacialis*, (Leach).—South Southerly; Old Squaw.

Doubtless an abundant visitor to the sea-coast of the State in winter. A single specimen was shot at Santa Barbara in June. This bird, a female, had from some cause or other remained behind, and the plumage was so much worn and in such a faded condition as to be scarcely recognizable.

No.	Sex.	Locality.	Date.	Collector.
9	♀	Santa Barbara, Cal.....	June 9	H. W. Henshaw.

187. *OEdemia perspicillata*; *Melanetta velutina*; *Pelionetta perspicillata*.

The three species of Sea Coot occur abundantly all along the Californian coast in winter.

In passing down the coast in June from San Francisco to Santa Barbara, I saw large numbers of Coot all along the shore and in the little bays. These were probably the young and barren birds, which did not go north to breed. Of what species these were,

or whether, as is probable, the three were not represented, I am not able to say. About the island of Santa Cruz, they were to be seen at this time by hundreds. A single one shot here proved to be the *Melanetta*; but I am reasonably sure that all three birds were present. Their fishy diet and coarse flesh render them, if edible at all, anything but palatable food, and hence they are scarcely ever disturbed. As a result, they have become very tame, and approach close to the wharves and vessels in the harbor of San Francisco with the utmost unconcern.

188. *Mergus serrator*, (Linn.).—Red-breasted Merganser.

Very numerous in fall and winter, both on the coast and inland. A single bird, worn and faded, was shot, June 7, at Santa Barbara. The *Mergus merganser* also occurs in large numbers.

189. *Mergus cucullatus*, (Linn.).—Hooded Merganser.

Appears in fall in large numbers as a migrant.

PELECANIDÆ.—PELICANS.

190. *Pelecanus trachyrhynchus*, (Lath.).—White Pelican.

The most conspicuous of all the feathered tribe that we found assembled at Kern Lake were the White Pelicans, noticeable both from their great size and the extreme whiteness of their plumage. This was in August, and the birds had probably remained here all summer, breeding somewhere about the lake. During the hours of mid-day they appeared to give up fishing entirely, and, betaking themselves to some dry spot along the lake, they dozed away the unoccupied hours, standing motionless in long rows, with their heads drawn on their breasts, and appearing lost to all around them. They were not, however, so taken up with their own meditations as to be forgetful of safety, and roused themselves always in time to be up and away ere I could get fairly within gunshot. They breed very early. Captain Bendire found the eggs of this bird in Oregon as early as April 12, though they continued laying eggs till into May. They are present upon all the inland waters of any size in California, and less often and in fewer number are found upon the coast.

191. *Pelecanus fuscus*, (Linn.).—Brown Pelican.

Pelecanus fuscus, Newb., P. R. R. Rep., vi, 1857, 108.—Bd., B. N. A., 1858, 870.—Heermann, P. R. R. Rep., x, 1859, 72.—Coop & Suckl., ibid., 12, 1860, 266.—Coues, Key N. A. B., 1872, 300.

In contrast to the habits of its more showy white cousin, which resorts to the fresh waters of the interior, breeding and living there, the Brown Pelican is found exclusively on the sea-coast, resorting to the bays and shallow inlets where are found the small fry which constitute its food. The waters about San Francisco are particularly favored by this bird, and in a trip across the bay one may see hundreds of these huge, uncouth birds winnowing their way from one fishing-ground to another with slow, measured wing-beats, or diving with sure aim from mid-air on some luckless fish swimming near the surface. Undisturbed, they roam the bay at will, viewing the approach of steamer and vessel with utmost unconcern, and often, indeed, remaining on the water till almost run down by the approaching craft, when they lazily clear the water with heavy strokes and fly from almost under the bows. On account of their heavy bodies and the length of wings, they raise themselves with some little difficulty, and it requires a number of quick, vigorous strokes, delivered upon the surface of the water, ere they can get fairly on the wing. They progress easily and firmly, now flopping their broad wings till the desired momentm is obtained, now gliding without motion on outstretched pinions. When fishing, they keep a few feet, from 10 to 20, above the water, and when a fish is discovered they gather themselves for the effort by a few short strokes of the wing; then with head down descend, making the water foam with the violence of their plunge. At night-fall they retire from the bay to distant sleeping-grounds, probably, as noticed by Dr. Newberry, to the broad expanse of the ocean, and when going and coming they fly in lines, and just clear the surface of the water, falling and rising with the heaving waves.

About the island of Santa Cruz, these birds were uncommon, and I saw but few.

GRACULIDÆ.—CORMORANTS.

192. *Graculus dilophus*.—Gray Double-crested Cormorant.

This species nests on the Farallone Islands in great abundance, as also upon the Santa Barbara group. It is common along the coast, and is also found on the large bodies of water inland, as at Kern Lake, where it was numerous.

193. *Graculus penicillatus*, (Gray).—Brandt's Cormorant.

This is one of the Cormorants found upon the Farallone Islands in summer, and no doubt breeds also on the Santa Barbara Islands, though I was not able to satisfy myself perfectly of its presence on Santa Cruz in June. A specimen, however, taken on San Mignel was very kindly presented me by Captain Forney, who shot numbers of the same kind.

194. *Graculus violaceus*, (Gray), var. *bairdii*, Cooper.

The Violet-green Cormorant of Oregon, Washington Territory, and to the northward, is represented on the Californian coast by a smaller bird, which appears to be its southern race. The difference is one chiefly of size, the discrepancy being in this particular considerable and out of the range of purely individual differentiation. The proportions, colors, &c., of the two appear to be identical.

This bird is very numerous all along the coast of Southern California, and probably reaches northward into Oregon. I saw many in San Francisco Bay in May, and on reaching the islands of the Santa Barbara Channel it was found congregated in great numbers. Most of the places they had selected as nesting-sites were inaccessible to me. At low tide I succeeded in entering one of the gloomy caverns, where a dozen pairs had established themselves. The nests were merely collections of weeds and sticks matted together and placed upon the shelves of rock sufficiently high to be out of danger from the tide. This was June 4, and they all contained young in the downy state. The old birds forsook the place in a mass, and flew wildly about the entrance, but without attempting to re-enter, though the young birds kept up a vociferous calling all the while. In flying about the island, the old birds passed within easy gunshot of the rocky points, and I could have procured all the specimens I desired had it not been for the strong surf which swept the shores and made their recovery very hazardous. They never ventured over the land. It is a constant habit with these birds, having spent the morning in fishing, and having appeased their hunger, to sit in groups on the cliffs which immediately overhang the water, and often in such numbers as to blaken the rocks. When disturbed, those nearest to the edge drop overboard, while those in the rear scramble forward in the most awkward way, and, having made the plunge, swim underneath the water till they have gained a safe distance.

The present species was immediately recognizable among its congeners by its small size. The white flank-tufts are, I think, a distinguishable feature of the breeding-period, and are soon lost. They were seen only in the males, and the size is extremely variable; being in some individuals scarcely discernible, while in others they were conspicuous at a long distance.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
784	♂ ad.	Santa Cruz Island, Cal	June —	H. W. Henshaw...	9.75	7.00	1.85	1.90
785	♂ ad.	.....do	June —	....do	9.75	7.00	1.78	1.85
783	♀ ad.	.....do	June —	....do	10.10	7.50	1.97	2.10

LARIDÆ.—GULLS; TERNS.

195. *Larus argentatus*, (Brünn.,) var. *occidentalis*, Aud.—Pacific Herring Gull.

This Gull is very numerous in San Francisco Harbor, as it is indeed in all the bays and inlets of the coast, and its numbers are perhaps greater the year round than any other species. Free from molestation, they have become almost semi-domesticated, and fly about the wharves and over the vessels with an impunity only born of long immunity from danger. The rocky islets along the coast furnish them with safe and plentiful breeding-grounds. At Santa Cruz, thousands had congregated and were nesting in early June. In a few instances, they had attempted to nidifyate on the mainland, but a few feathers and bits of egg-shells about the nests told in each case the fate of parent and eggs; their enemy was the foxes, whose numbers are scarcely without limit. Only one of the small adjoining islets was accessible to me. A few pairs had nested here. The nests were made of a good generous supply of sea-weed and like material, well matted together, the cavity being quite deep. The eggs are of a greenish olive, spattered profusely and irregularly with blackish markings.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
11	Ad.	Santa Cruz Island, Cal..	June 9	H. W. Henshaw...	16.75	7.00	2.29	2.27
22	♀ ad.	.....do	June 11	....do	15.50	6.60	2.08	2.34
781	Ad.	.....do	June 11	....do	16.10	6.00	2.34	2.48

196. *Larus (Blasipus) heermanii*, (Cass.)—Heermann's Gull.

A very large flock of these Gulls was seen pursuing their way along the shore near Santa Barbara, and two or three hours later I came upon them where they had settled upon a rocky point which jutted out into the water. Many were engaged fishing, hovering over the half-submerged kelp-covered rocks, the shallow water surrounding which evidently harbored the smaller kinds of fish. In three or four discharges of my gun I obtained a dozen specimens, when the whole mass flew wildly about as though fascinated by the sight of their dead comrades, and it was some time ere they left the place, which they did in a long straggling flock. The whole flock was composed of old males, and from their long and direct flight it seemed pretty evident that the journey was one between their breeding-grounds and this fishing-place, where was had an abundance of some food, perhaps peculiarly fitted for the young. The species is a common one all along the coast, and breeds upon many of the sea-islands.

Several other species of Gulls and at least one species of Jaeger were observed along the coast; but my acquaintance with them was altogether of too unsatisfactory a nature to warrant any mention of them here.

No.	Sex.	Locality.	Date.	Collector.	Wing.	Tail.	Bill.	Tarsus.
39	♂ ad.	Santa Barbara, Cal.....	June 24	H. W. Henshaw...	13.25	6.00	1.70	1.98
40	♂ ad.	.....do.....	June 24	....do.....	13.90	6.20	1.83	1.98
41	♂ ad.	.....do.....	June 24	....do.....	13.70	6.00	1.77	2.03
42	♂ ad.	.....do.....	June 24	....do.....	13.25	5.75	1.75	1.90
44	♂ ad.	.....do.....	June 24	....do.....	14.25	6.00	1.85	2.09

197. *Sterna regia*, (Gamb.)—Royal Tern.

This Tern probably reaches no farther to the north than the coast of California, where it appears to be of rather common occurrence. I saw it up as far as San Francisco. A specimen obtained on San Miguel was presented by Captain Forney, to whom I am under obligation for other similar kindnesses. Upon this and perhaps others of the Santa Barbara group, the species breeds. At least one other of the small Terns was seen about San Francisco, but its identity could not be established.

198. *Hydrochelidon lariformis*, (Linn.).—Black Tern.

Saw this species but once, in the interior, north of Los Angeles; according to other observers, the bird is numerous on the inland waters.

PROCELLARIIDÆ.—PETRELS.

199. *Cymochorea homochroa*, (Coves.)—Lesser Black Petrel.

Petrels are quite numerous along the coast of California. A specimen of the above species, so identified by Dr. Coves, was given me by Captain Forney, who found these birds breeding in great numbers on San Miguel. As usual, they were nesting in burrows. The relationship of this bird with the *C. melania* is somewhat obscure, and a good series to confirm this supposed distinctness is greatly to be desired.

No.	Sex.	Season.	Locality.	Collector.	Wing.	Tail.	Bill.	Tarsus.
....	Ad.	Summer.	San Miguel Island, Cal.....	Captain Forney.	5.35	8.35	0.60	0.88

COLYMBIDÆ.—LOONS.

200. *Colymbus torquatus*, (Briinn.)—Great Northern Diver.

Numerous on the California coast in fall. The *C. arcticus* var. *pacificus* is also known to be common in winter.

PODICIPIDÆ.—GREBES.

201. *Podiceps auritus*, (Linn.), var. *californicus*, Heerm.—Eared Grebe.

Coincident with its general dispersion in the West, this Grebe appears to be distributed over California. We only saw it in the fresh-water ponds, though it also occurs along the shore.

No.	Sex.	Locality.	Date.	Collector.
298	♂ ad.	Near Fort Tejon, Cal	July 24	H. W. Henshaw.

202. *Podilymbus podiceps*, (Linn.).—Carolina Grebe.

Present in numbers on many of the fresh-water ponds of the interior; found also on the coast. The *P. cornutus* was not recognized by us, though it, too, is found numerously in fall.

ALCIDÆ.—AUKS.

203. *Fratercula cirrhata*, (Pallas).—Tufted Puffin.

This Puffin, though more commonly known as a resident of the far north, was ascertained by us to inhabit the islands of the Santa Barbara group in summer. It was not uncommon, and was nesting apparently in the crevices of the cliffs, from which I frequently saw it flying back and forth. Heermann likewise found it breeding in numbers on the Farallone Islands.

204. *Uria columba*, (Pallas).—Western Guillemot.

The Santa Barbara Islands form, too, it is probable, about the southern limit for this species in summer; among them it is, however, numerous—breeding in the caves and hollows of the generally inaccessible cliffs. Early one morning, while out collecting, I noticed many of these birds frightened at the report of my gun, streaming out of a little ravine hemmed in by high rocky cliffs, and terminating at the upper end in a low narrow cave. The tide being at its lowest, I succeeded in gaining the entrance, and, crawling on my hands and knees for a short distance, I soon had the satisfaction of placing my hands on the eggs. Their housekeeping arrangements are of the simplest kind. No nest at all is prepared to receive the eggs; but these were deposited on the sandy floor of the cavern, and at its farther end, where it was so dark that I had to strike a match to see them at all. Other pairs had availed themselves of the nooks and fissures in the face of the wall, and laid their two eggs on the bare rock. I succeeded in finding a few only of the many eggs that must have been deposited here, as the shelves of the rocks were, in many instances, too high to be reached. The birds submitted to the pillage without a murmur, though not without solicitude, as their anxious manner as they swam back and forth at the entrance to the ravine, keeping, however, well out of gunshot, sufficiently evinced.

The eggs are a faint greenish white, spotted mostly at the larger end with irregular blotchings.

Very respectfully, your obedient servant,

H. W. HENSHAW.

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